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MCMXXXIX.-MCMXL.



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L A W S

OF THE

SOCIETY OF ANTIQUARIES OF SCOTLAND.

INSTITUTED NOVEMBER 1780 AND INCORPORATED BY
ROYAL CHARTER 6TH MAY 1783.

(Revised and adopted November 30, 1901.)

1. The purpose of the Society shall be the promotion of ARCHÆOLOGY, especially as connected with the investigation of the ANTIQUITIES AND HISTORY OF SCOTLAND.

2. The Society shall consist of Fellows, Honorary Fellows, Corresponding Members, and Lady Associates.

3. Candidates for admission as Fellows must sign the Form of Application prescribed by the Council, and must be proposed by a Fellow and seconded by two members of the Council. Admission shall be by ballot.

4. The Secretaries shall cause the names of the Candidates and of their Proposers to be inserted in the billet calling the Meeting at which they are to be balloted for. The Ballot may be taken for all the Candidates named in the billet at once; but if three or more black balls appear, the Chairman of the Meeting shall cause the Candidates to be balloted for singly. Any Candidate receiving less than two-thirds of the votes given shall not be admitted.

5. Honorary Fellows shall consist of persons eminent in Archæology, who must be recommended by the Council, and balloted for in the same way as Fellows; and they shall not be liable for any fees of admission or annual subscriptions. The number of Honorary Fellows shall not exceed twenty-five.

6. Corresponding Members must be recommended by the Council and balloted for in the same way as Fellows, and they shall not be liable for any fees of admission or annual subscriptions.

7. Ladies who have done valuable work in the field of Archæology may be admitted as Lady Associates. The number of Lady Associates shall not exceed twenty-five. They shall be proposed by the Council and

balloted for in the same way as Fellows, and shall not be liable for any fees of admission or annual subscriptions.

8. Before the name of any person is added to the List of Fellows, such person shall pay to the funds of the Society Two Guineas as an entrance fee and One Guinea for the current year's subscription, or may compound for the entrance fee and all annual subscriptions by the payment of Twenty Guineas at the time of admission. Fellows may compound for future annual subscriptions by a single payment of Fifteen Guineas after having paid five annual subscriptions; or of Ten Guineas after having paid ten annual subscriptions.

9. The subscription of One Guinea shall become due on the 30th November in each year for the year then commencing; and if any Fellow who has not compounded shall fail to pay the subscription for three successive years, due application having been made for payment, the Treasurer shall report the same to the Council, by whose authority the name of the defaulter may be erased from the list of Fellows.

10. Every Fellow not being in arrears of the annual subscription shall be entitled to receive the printed Proceedings of the Society from the date of election.

11. None but Fellows shall vote or hold any office in the Society.

12. Subject to the Laws and to the control of the Society in General Meetings, the affairs of the Society shall be managed by a Council elected and appointed as hereinafter set forth. Five Members of the Council shall be a quorum.

13. The Office-Bearers of the Society shall consist of a President, three Vice-Presidents, two Secretaries for general purposes, two Secretaries for Foreign Correspondence, a Treasurer, two Curators of the Museum, a Curator of Coins, and a Librarian. The President shall be elected for a period of five years, and the Vice-Presidents for a period of three years. One of the Vice-Presidents shall retire annually by rotation and shall not again be eligible for the same office until after the lapse of one year. All the other Office-Bearers shall be elected for one year and shall be eligible for re-election.

14. In accordance with the agreement subsisting between the Society and the Government, the Board of Manufactures (now the Board of Trustees) shall be represented on the Council by two of its Members (being Fellows of the Society) elected annually by the Society. The Treasury shall be represented on the Council by the King's and Lord Treasurer's Remembrancer (being a Fellow of the Society).

15. The Council shall consist of the Office-Bearers, the three representative Members above specified, and nine Fellows, elected by the Society.

16. Three of the nine elected Members of Council shall retire annually by rotation, and shall not again be eligible till after the lapse of one year. Vacancies among the elected Members of Council and Office-Bearers occurring by completion of term of office, by retirement on rotation, by resignation, by death or otherwise, shall be filled by election at the Annual General Meeting. The election shall be by Ballot, upon a list issued by the Council for that purpose to the Fellows at least fourteen days before the Meeting.

17. The Council may appoint committees or individuals to take charge of particular departments of the Society's business.

18. The Annual General Meeting of the Society shall take place on St Andrew's Day, the 30th of November, or on the following day if the 30th be a Sunday.

19. The Council shall have power to call Extraordinary General Meetings when they see cause.

20. The Ordinary Meetings of the Society shall be held on the second Monday of each month, from December to May inclusive.

21. Unless special arrangements to the contrary have been made, copyright of *The Proceedings* and of all papers printed therein, as well as of all illustrations, shall belong to the Society. This provision shall not apply to illustrations made from blocks borrowed from outside sources.

22. Every proposal for altering the Laws must be made through the Council; and the Secretaries, on instructions from the Council, shall cause intimation thereof to be made to all the Fellows at least one month before the General Meeting at which it is to be determined on.

Form of Special Bequest.

I, A. B., do hereby leave and bequeath to the Society of Antiquaries of Scotland incorporated by Royal Charter, my collection of _____ and I direct that the same shall be delivered to the said Society on the receipt of the Secretary or Treasurer thereof.

General Form of Bequest.

I, A. B., do hereby leave and bequeath to the Society of Antiquaries of Scotland incorporated by Royal Charter, the sum of £ _____ sterling [*to be used for the general purposes of the Society*] [*or, to be used for the special purpose or object of* _____], and I direct that the said sum may be paid to the said Society on the receipt of the Treasurer for the time being.

LIST OF THE FELLOWS, CORRESPONDING MEMBERS, HONORARY FELLOWS, ETC.

OF THE

SOCIETY OF ANTIQUARIES OF SCOTLAND,

NOVEMBER 30, 1940.

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- | | |
|--|---|
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| 1938. AGNEW, Colonel H. C., Bonjedward House, Jedburgh. | 1934. ANDERSON, Rev. JOHN, The Manse, Portnaburgh, Inlay. |
| 1931. AGNEW, Rev. HUGH M., M.A., Minister of St George's Presbyterian Church, 20 St James Road, East London, South Africa. | 1902.*ANDERSON, Major ROBERT DOUGLAS, c/o The Manager, Lloyd's Bank, Paignton, Devon. |
| 1933.*AILSA, The Most Hon. The MARCHIONESS OF, Culzean Castle, Maybole. | 1920. ANDERSON, Rev. ROBERT S. G., B.D., The Manse, Castle Kennedy, Wigtownshire. |
| 1935. AINSWORTH, JOHN FRANCIS, M.A., F.R.S.A.F., c/o British Record Society, Ltd., 120 Chancery Lane, London, W.C. 2. | 1930. ANDREW, Rev. HARRY, Minister of Gillfillan Memorial Church, Gillfillan Manse, Ancrum Road, Dundee. |
| 1929. ALEXANDER, W. M., Journalist, Hillview Road, Colts, Aberdeenshire. | 1921. ANGUS, WILLIAM, Keeper of the Registers and Records of Scotland, H.M. General Register House, Edinburgh, 2. |
| 1930. ALLAN, E., F.R.C.S.Ed., West View, Rose Avenue, Elgin. | 1920.*ANGUS-BUTTERWORTH, LIONEL MILNER, F.R.G.S., F.C.I.S., A.M.L.Mech.E., Vice-President of the Ancient Monuments Society, Ashton New Hall, The Old Village, Ashton-on-Mersey, Cheshire. |
| 1939. ALLAN, Miss ELIZABETH H. M., M.A., Hesselden, Melkiorriggs, Paisley. | 1910. ANNAN, J. CRAIG, Glenbank, Lenzie. |
| 1930. ALLAN, Mrs H. M., 10 Ainslie Place, Edinburgh, 3. | 1931. ARBUCKLE, WILLIAM F., M.A. (Edin. & Oxon.), H.M.I.S., 1 Murrayfield Gardens, Edinburgh, 12. |
| 1937. ALLAN, JOHN, M.A., F.S.A., Keeper of Coins, The British Museum, London, W.C. 1. | 1931. ARCHER, GILBERT, St Ola, Park Road, Leith, Edinburgh, 6. |
| 1926. ALLAN, WILLIAM, M.B.E., Rhindmuir House, Baillieston. | 1918.*AROTLL, His Grace The DUKE OF, Inveraray Castle. |
| 1929. ANCKORN, WILFRED LORRAINE, Three-Corner Mead, Duntun Green, Kent. | 1910. ARMSTRONG, A. LESLIE, M.C., F.S.I., F.S.A., 27 Victoria Road, Stockton Heath, Warrington. |
| 1925. ANDERSON, ALEXANDER HUTTON, M.A., Leny House, Muthill, Perthshire. | 1921. ANNOTT, JAMES ALEXANDER, F.R.I.B.A., 24 Duke Street, Edinburgh, 1. |
| 1922.*ANDERSON, ARTHUR R., 8 Park Terrace, Glasgow, C. 3. | |
| 1940. ANDERSON, DAVID, Record Office, H.M. General Register House, Edinburgh, 1. | |

An asterisk (*) denotes Life Members who have compounded for their Annual Contributions.

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- 1917.*ATHOLL, His Grace The DUKE OF, K.T., C.B., M.V.O., D.S.O., LL.D., Blair Castle, Blair Atholl.
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1936. BAIRD, GERALD FORTAY, F.L.A.S., Chartered Land Agent, Derwent, Helensburgh.
1925. BAIRD, JAMES, 42 Finlay Drive, Dennistoun, Glasgow, E. 1.
1922. BAIRD, Sir WILLIAM MACDONALD, J.P., F.F.S., 7 St Colme Street, Edinburgh, 3.
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1936. BALLANTINE, WILLIAM ARCHIBALD, F.S.I., Chartered Surveyor, 10 Murrayfield Gardens, Edinburgh, 12.
- 1926.*BANNERMAN, JOHN, St Margaret's, Elgin.
1928. BANNERMAN, Captain RONALD B. BRUCE, M.C., 19 Dorston Road, South Croydon.
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1936. BARNETSON, JAMES, J.P., Georgemas, Halkirk, Caithness.
- 1897.*BARNETT, Rev. T. HATCLIFFE, Ph.D., 7 Corrennie Gardens, Edinburgh, 10.
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1922. BARRIE, JOHN ALEXANDER, 11 Lady Road, Edinburgh, 9.
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1927. BATTERSBY, JAMES, F.R.C.S.Eng., etc., Edenkerry, Helensburgh.
1930. BAXTER, WILLIAM, Public Works Contractor, Eskdale, 153 High Street, Tranent.
- 1884.*BEATON, Lieut.-Colonel ANGUS J., C.M.G., V.D., c/o Standard Bank of South Africa, 10 Clement's Lane, London.
1931. BEATTIE, DAVID J., Sculptor, Kenilworth, Talbot Road, Carlisle.
1935. BELL, Miss ELIZABETH TURNER, J.P., F.E.I.S., 4 Rillbank Crescent, Edinburgh, 9.
1937. BELL, GEORGE E. J., The Studio, 11 Rutland Road, Harrogate, Yorks.
- 1929.*BELL, Rev. WILLIAM NAPIER, M.A., 37 Oakfield Avenue, Glasgow, W. 2.
1928. BENTON, Miss SYLVIA, M.A. (Camb.), B.Litt., 6 Winchester Road, Oxford.
1929. BENTHAM, DONALD, Manager, Orkney Steam Navigation Co., Ltd., 20 East Road, Kirkwall.
1930. BEVERIDGE, Rev. JOHN, M.R.E., B.D., 38 Broomhouse Road, Corstorphine, Edinburgh, 12.
1927. BICKERSTETH, Miss MARGUERITE ELIZABETH, Ph.D., 32 Stafford Street, Edinburgh, 3.
- 1932.*BIRLEY, ERIC, M.A., F.S.A., 22 Old Elvet, Durham.
1909. BISHOP, ANDREW HENDERSON, Thornton Hall, Lanarkshire.
1922. BISHOP, FREDERICK, Ruthven House, Colinton.
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1938. BISSET, Lieut.-Colonel J. S., R.E. (retired), 135 Warrender Park Road, Edinburgh.
1937. BLACK, ANDREW, "Carnethy," 5 Clepington Road, Maryfield, Dundee.
1933. BLACKATER, JOHN C., Jr., F.R.G.S., F.Z.S. (Scot.), Royal Exchange (Box 1), Queen Street, Glasgow, C.1.
1932. BLACKWOOD, ROBERT, J.P., 9 Oxford Street, Dundee.
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1933. HAMILTON, Sir ROBERT W., Knt., F.R.G.S., The Grange, Hadlow Down, Sussex.
- 1901.*HAMILTON OF DALZELL, The Right Hon. LORD, K.T., C.V.O., Dalzell, Motherwell.
1935. HAMPSON, CHARLES P., Wentworth, Eccles, Lancs.
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- 1927.*HARRISON, EDWARD S., The Bield, Elgin.
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- 1930.*HUME, Lieut.-Col. EDGAR ERSKINE, M.C., U.S. Army, B.A., M.A., M.D., LL.D., D.Litt., Dr. P.H., D.T.M., Sc.D., The Magnolias, Frankfort, Kentucky, U.S.A.
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- 1912.*KING, Captain CHARLES, F.S.Sc. Lond., F.C.S., 11 Kelvin Drive, Glasgow, N.W.
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- 1924.*KNOX, WILLIAM BAER, Ryefield, Dalry, Ayrshire.
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1923. LAMB, Rev. GEORGE, B.D., Beechwood, Melrose.
1929. LAMONT, JOHN M., O.B.E., LL.D., J.P., Clerk of Lieutenancy and Vice-Convenor of Buteshire, etc., Ardentigh, Port Bannatyne, Bute.
- 1901.*LAMONT, Sir NORMAN, Bt., M.P., of Knockdow, Toward, Argyllshire.
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1927. LIDDELL, BUCKHAM W., W.S., Union Bank House, Pitlochry.
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1934. MACLEAN, Rev. JOHN, Manse of Lochalsh,
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1932. MACLEAN, ROBERT GELLATLY, F.A.I. (Lond.),
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- 1885.*MACLEHOSE, JAMES, M.A., LL.D., F.S.A.,
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1934. M'LEOD, ALEXANDER GRANT, M.A., "Harp-
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1939. MACLEOD, ANGUS, Mount Tabor, Kinnoull,
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1930. M'LEOD, DONALD, 4502 West 7th Avenue,
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1933. MACLEOD, Rev. DONALD, The Manse, Apple-
cross, Ross-shire.
1910. MACLEOD, F. T., 55 Grange Road, Edin-
burgh, 9.
1924. MACLEOD, Sir JOHN LORNE, G.B.E., LL.D., 72
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1922. MACLEOD, Rev. MALCOLM, M.A., The Manse of
Balquhider, Strathys, Perthshire.
1925. MACLEOD, Rev. WILLIAM, B.D., Ph.D., St Brouc
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1919. MACLEROY, Rev. CAMPBELL M., B.D., Minister
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1926. M'LINTOCK, JAMES, Ivy House, Lennoxtown.
1933. MACMASTER, THOMAS, Secretary, Caledonian
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1905. MACMILLAN, The Right Hon. LORD, of Aber-
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- 1916.*M'MILLAN, Rev. WILLIAM, D.D., Ph.D., Chaplain
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1933. M'MURDO, JAMES, 8571 144th Street, Jamaica, N.Y., U.S.A.
1936. M'NAUGHTON, DUNCAN, M.A., 4 Forth Crescent, Stirling.
1915. MACNEIL, ROBERT LISTER, of Barra, Barra House, Marlboro', Vermont, U.S.A.
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1936. MACNEILL, REV. MALCOLM, The Manse of Kilmorran, Glendaruel, Argyll.
- 1934.*M'NEILL, NEIL, of Ardnacross, Cloquhat, Bridge of Cally, Perthshire.
- 1909.*MACRAE, Colonel Sir COLIN WILLIAM, C.V.O., C.B.E., V.L., Collintraine, Argyll.
1920. MACRAE, REV. DUNCAN, 26 Douglas Crescent, Edinburgh, 12.
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1930. MAEY, ARTHUR JAMES, Branton, Sunwine Place, Exmouth, Devon.
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1939. MAITLAND, Lieut.-Colonel GEORGE RAMSAY, of Burnside, Forfar, Angus.
1926. MAITLAND, MRS MILDRED E., Larnach, Aberfoyle, Perthshire.
1928. MALCOLM, Sir IAN, of Poltalloch, K.C.M.G., D.L., J.P., Poltalloch, Kilmartin, Argyll.
1914. MALLOCH, JAMES J., M.A., Norwood, Spylaw Bank Road, Colinton.
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1933. MASON, JOHN, 20 Abbotsford Street, Dundee.
- 1925.*MATHESON, NEIL, Forest Lodge, Selkirk.
1933. MATHEW, JAMES, 18 Airlie Place, Dundee.
- 1892.*MAXWELL, Sir JOHN STIRLING, Bt., K.T., D.L., H.R.S.A., Pollok House, Glasgow, S. 3,—*President*.
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1939. MAYES, WALTER PHILIP, Curator, The Museum and Art Galleries, Paisley.
- 1924.*MEIKLE, Rev. JAMES, B.D., 15 St Clair Terrace, Edinburgh, 10.
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1940. MENZIES, Dr W. Menzies, 25 Castle Terrace, Edinburgh, 1.
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1939. MOFFAT, FORREST MEICHEAD, "Auchenrigg," Bearsden, Dunbartonshire.
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1934. MUNNOCH, JAMES, F.R.S.E., 15 Liberton Drive, Liberton, Edinburgh, 9.
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1924. OGILVIE, JAMES D., Barloch, Milngavie.
- 1907.*OKE, ALFRED WILLIAM, B.A., F.I.S., 32 Denmark Villas, Hove, Sussex.
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1926. OLIVER, Mrs F. S., Edgerston, near Jedburgh.
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1939. PATERSON, JAMES GRAHAM, Wellwood, Irvine, Ayrshire.
1934. PATERSON, The Very Rev. JOHN N. M., The Manse, King William's Town, C.P., South Africa.
1915. PATERSON, JOHN WILSON, C.V.O., M.R.E., A.R.I.B.A., Principal Architect, H.M. Office of Works, 11 Abinger Gardens, Murrayfield, Edinburgh, 12.
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1934. PATON, EDWARD RICHMOND, B.A.(Cantab.), F.Z.S., M.B.O.U., of Harshawmuir, sis Kilmarnock, Ayrshire.
1936. PATON, HENRY MACLEOD, Curator of Historical Records, H.M. Register House, 5 Little Road, Liberton, Edinburgh, 9.
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1928. PAUL, Lieut.-Colonel J. W. BALFOUR, D.S.O., D.L., *Marchmont Herald*, Cakemuir, Tyneshead, Midlothian.
1923. PRANSON, Rev. Professor A. F. SCOTT, M.A., B.D., D.Th., D.Litt., F.R.Hist.S., The Manse, Johnston, Renfrewshire.
1940. PERRIDGE, Major FRANK S., 45 Third Avenue, Newton Park, Port Elizabeth, South Africa.

1930. PETERS, ARTHUR BOWDEN, F.R.Met.S., Librarian and Curator, Inverness Public Library.
1938. PIGGOTT, STUART, Priory Farm, Rockbourne, Hants.
1926. PILKINGTON, ALAN D., Dear Wood, Newbury, Berks.
1939. PINK, LESLIE GILBERT, B.A.(Lond.), 20 Arundel Mansions, Fulham Road, London, S.W. 6.
1939. PITT-KETHLEY, HORACE VICTOR, "Wayside," Amersham, Bucks.
1939. PORTER, ERIC BRIAN, 3 Riley Avenue, St Anne-on-Sea.
- 1901.*PORTLAND, His Grace The Duke of, K.G., Welbeck Abbey, Notts.
1937. POWLER, GEORGE COLLINGSWOOD BROWNLOW, Collingwood Place, Camberley, Surrey.
1927. PRENTICE, JAMES, c/o Mrs Osborne, 1 Lordswood Close, Bassett, Southampton.
- 1911.*PRESTON, FRANK A. B., F.I.S.E., F.R.San.I., F.R.S.E., M.I.Struct.E., L.R.I.B.A., M.T.P.I., Craigrowrie, Briarwell Road, Milngavie.
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1932. QUH, JAMES SYMINGTON, Ravensraig, Falkirk.
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1932. RAMSAY, DAVID GEORGE, M.A., B.Sc., Rector of Kirkcudbright Academy, Skair Kildale, Kirkcudbright.
- 1924.*RAMSAY, DOUGLAS M., J.P., Bowland, Galashiels, Selkirkshire.
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- 1908.*RANKIN, WILLIAM BLACK, of Cloddans, 2 Rothney Terrace, Edinburgh, 3.
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1927. RATCLIFFE, JOSEPH RULEY, M.B., C.M. (Edin.), F.R.S.E., 22 Wake Green Road, Moseley, Birmingham.
1906. RAVES, ALEXANDER JAMES, c/o The Bank at Adelaide, 11 Leadenhall Street, London, E.C. 3.
1909. REID, ALFONSO STODART, J.P., Bank of England, Manchester, 2.
1931. REVELSON, JOHN, Queen Mary's House, Jedburgh.
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1935. RICE, D. TALBOT, M.A., B.Sc., D.Litt.(Oxon.), Professor of Fine Art, Edinburgh University, 33 Moray Place, Edinburgh, 3.
- 1928.*RICHARDSON, FRANCIS, Blairferkie, Bridge of Allan.
- 1912.*RICHARDSON, JAMES S., Inspector of Ancient Monuments, H.M. Office of Works, 123 George Street, Edinburgh, 2.—*Curator of Museum*.
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1935. RICHMOND, IAN A., M.A., P.S.A., Lecturer in Roman-British Archaeology, University of Durham, King's College, Newcastle-upon-Tyne, 2.
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1933. ROBE, JAMES A. T., 128 Beechwood Gardens, Ilford, Essex.
1933. ROBERTS, FERGUS, Joint Town Clerk, Kirkcaldy, Kirkcaldy, Dumbarton.
1940. ROBERTS, Rev. MATTHEW JOHN, M.A., Chaplain, Royal Air Force, R.A.F. Officers' Mess, Montrose, Angus.
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1905. ROBERTSON, W. G. AITCHISON, M.D., D.Sc., F.R.C.P.E., St Margaret's, St Valerie Road, Bournemouth.
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1939. ROBERTSON-COLLIE, ALEXANDER, 357 Holburn Street, Aberdeen.
1930. ROBINSON, REV. W. EASON, M.A., L.Th. 4, Pentland Villas, Juniper Green, Edinburgh.
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1927. ROWATT, THOMAS, O.B.E., M.M., M.I.Mech.E., Director, Royal Scottish Museum, Spottiswoode, Colinton.
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1933. SMITH, ALEXANDER, M.A., F.R.S.A. (no address).
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1913. STEVENSON, NORMAN, 3 Baillieston Road, Glasgow, E. 2.
1913. STEVENSON, PERCY R., 7a Young Street, Edinburgh, 2.
1939. STEVENSON, ROBERT B. K., M.A., 31 Mansionhouse Road, Edinburgh, 9,—Keeper of the Museum.
1937. STEVENSON, WILLIAM B., D.Litt., D.D., LL.D., Emeritus Professor, 31 Mansionhouse Road, Edinburgh, 9.
1922. STEWART, ANDREW, H.M. Inspector of Taxes, 2 Caird Drive, Partick, Glasgow, W. 1.
1922. STEWART, CHARLES, C.A., Bracken Branch, Downfield, Dundee.
- 1925.*STEWART, IAN R. H., 11 Farquhar Road, Wimbledon Park, London, S.W. 19.
- 1917.*STEWART, JOHN ALEXANDER, Bonaly, Clynder, Helensburgh.
1939. STEWART, Major JOHN PHILIP, M.D., F.R.C.S.Ed., R.A.M.C., 18 Chester Street, Edinburgh, 3.
1929. STEWART, Mrs JOHN A., Tempair, Dupplin Terrace, Kinnoull, Perth.
1925. STIRLING, Colonel ARCHIBALD, of Garden, Sandyholes, Kippen, Stirlingshire.
1908. STURTON, Rev. JOHN, C.V.O., B.D., D.D., Dalsine, Dreghorn Loan, Colinton.
1925. STORIE, WILLIAM STEVENSON, L.A., S.S.C., N.P., 9 Merchiston Crescent, Edinburgh, 10.
- 1930.*STRATHCONA AND MOUNT ROYAL, The Right Hon. LORD, 14 South Audley Street, London, W. 1.
1929. STRUTHERS, Major JAMES G., D.S.C., Anlmaddy Castle, by Oban.
- 1939.*STUART, Lord DAVID, Ascog, Rothsay, Bute.
1939. STURROCK, EDWIN D., 2 Melison Street, Dundee.
1933. STURROCK, J. FREDERICK, 417 Blackness Road, Dundee.
1925. SUTHERLAND, His Grace THE DUKE OF, Dunrobin Castle, Sutherland.

1938. SUTHERLAND, FRANCIS G., W.S., 2 Arboretum Road, Edinburgh, 4.
1937. SUTHERLAND, HAROLD HADCO, Solicitor, Aikerness, Wellpark Avenue, Kilmarnock, Ayrshire.
1923. SUTTELL, ARNOLD, L.R.I.B.A., M.Inst.M. & C.Y.E., M.R.S.I., Halifax Chambers, Oxford Street, Hatrogate, Yorkshire.
1916. SWAN, T. ALKMAN, A.R.I.B.A., 7 St Colme Street, Edinburgh, 3.
- 1916.*TAIT, EDWIN SEYMOUR REID, Bydin, St Olaf Street, Lerwick, Shetland.
1933. TAIT, JAMES, 431 E. Congress Street, Detroit, Mich., U.S.A.
1929. TAYLOR, ALEXANDER B., M.A., D.Litt., "Glen-garry," Old Mearns Road, Newton Mearns, Glasgow.
1927. TAYLOR, CHARLES, 13 Westland Drive, Scotstoun, Glasgow, W. 4.
1917. TAYLOR, FRANK J., 21 Tankerville Terrace, Jesmond, Newcastle-on-Tyne.
1929. TAYLOR, JAMES, 5604 De Longpre Avenue, Hollywood, California.
1930. TAYLOR, JOHN, Collegehill House, Roslin, Midlothian.
1934. TEGGIN, JAMES RONALD, M.A., 78 Framingham Road, Brooklands, Cheshire.
1939. TENRELL, HENRY, 13 Queenshaugh Drive, Stirling.
1902. THIN, ROBERT, M.A., M.B., C.M., LL.D., 25 Abercromby Place, Edinburgh, 3.
- 1926.*THOMPSON, Professor HAROLD WILLIAM, A.M., Ph.D., New York State College, Albany, New York State, U.S.A.
- 1906.*THOMPSON, DAVID COUPER, J.P., D.L., Inveravon, Broughtly Ferry.
1920. THOMPSON, GEORGE CLARK, Barrister-at-Law, P.O. Box 880, Swift Current, Saskatchewan, Canada.
1913. THOMPSON, JAMES, The Cedars, 21 Fortis Green, East Finchley, London, N. 2.
1930. THOMPSON, JAMES CORNWALLIS, C.A., 35 Saltoun Street, Glasgow, W. 2.
1913. THOMPSON, JOHN GORDON, S.S.C., 54 Castle Street, Edinburgh, 2.
1927. THOMPSON, J. F. GORDON, M.A., Advocate, 26 Heriot Row, Edinburgh, 3.
1931. THOMPSON, J. MILLER, W.S., 5 St Colme Street, Edinburgh, 3.
1926. THOMPSON, LESLIE GRAHAME, A.R.S.A., A.R.I.B.A., F.R.I.A.S., "Strongara," West Linton, Peeblesshire.
1927. THOMPSON, Mrs. Callands, West Linton, Peeblesshire.
1937. THOMPSON, ROBERT, B.Sc., Ph.D., A.M.I.Mech.E., R.A.P.V.R., F.R.S.E., "Moorfield," Butler's Cross, Aylesbury, Bucks.
1936. THOMPSON, THOMAS LAUDER, M.D., D.P.H., County Medical Officer, Dunbartonshire, Lauderdale, Dumbarton.
1910. THOMPSON, WILLIAM N., Architect, Hope Chambers, 52 Leith Walk, Edinburgh, 6.
1911. THORBURN, Lt.-Col. WILLIAM, O.B.E., Woodville, Annan, Dumfriesshire.
1930. THORNEYCROFT, WALLACE, of Dalruidion, Chalmington, Dorchester.
1932. THREPLAND, PATRICK WYNDHAM MURRAY, Dryburgh Abbey, St Boswells.
- 1933.*THYNE, JAMES COWAN, St Helena, Downfield, Dundee.
1930. TOD, THOMAS M., West Brackly, Kinross.
1924. TOD, WILLIAM A., Dunrobin, Belfield Road, West Ewell, Surrey.
1935. TOLLAND, Rev. JAMES, The Manse, Belmont Church Road, Belfast.
1936. TOWILL, Rev. EDWIN S., M.A., B.D., 32 Blakelock Place, Edinburgh, 9.
- 1902.*TRAILL, H. LIONEL NORTON, F.R.G.S., Capt., 4th Highland Light Infantry, c/o Captain M. P. Traill-Smith, R.N., "Wainford," Herschel Road, Claremont, Capetown, South Africa.
1917. TRAILL, WILLIAM, C.E., J.P., Holland, Papa Westray, Orkney.
1932. TRANTER, NIGEL G., The Cross Cottage, Aberlady.
1939. TRENCH, G. MACKENZIE, O.B.E., F.R.I.B.A., F.S.I., Glen Morven, Forest Drive, Kingswood, Surrey.
- 1922.*TROTTER, GEORGE CLARK, M.D., Ch.B. (Edin.), D.P.H. (Aberd.), F.R.S.E., Braemar, 17 Haslemere Road, Crouch End, London, N. 8.
1924. TULLIS, JAMES KENNEDY, Balnagle Brae, Tullibody, by Stirling.
1925. TULLOCH, JAMES, M.A., 5 Wilton Gardens, Glasgow, N.W.
1934. TULLOCH, ROBERT G., M.A., 10 East Camus Road, Farnhillhead, Edinburgh, 10.
1936. TUNSTILL, W. H., Monkholme, Corbiehill Road, Davidson's Mains, Edinburgh, 4.
1922. TURNBULL, JOHN W., Kilbride, Millhouse, Tighnabruach, Argyll.
1926. TURNER, FRED. A., F.R.Hist.S., Lasswade Cottage, 15 Penwerrie Avenue, Osterley, Middlesex.
1937. TYRACK, FRANCIS JAMES, A.R.P.S., 15 Barkers Road, Nether Edge, Sheffield, 7.

- 1917.*URQUHART, ALASTAIR, D.S.O., Latimer Cottage, Latimer, near Chesham, Bucks.
1930. VALE, THOMAS H., A.C.A., Pakington House, 154 Rosemary Hill Road, Little Aston, Staffs.
- 1935.*VALENTINE, WILLIAM HARRIS, The Mansion House, Auchterhouse, by Dundee.
1936. VAN GIFFEN, Professor A. E., Biologisch Archaeologisch Instituut, Rijks Universiteit, Poststr. 6, Groningen, Holland.
- 1920.*VARMA, Prof. S. P., M.A., of Robertson College (no address).
- 1933.*VEITCH, GEORGE, C.A., 14 Chalmers Crescent, Edinburgh, 9.
1921. WADDELL, J. JEFFREY, I.A., Architect, Caldergrove, Hallside, Lanarkshire.
1928. WALKER, ALEXANDER, 424 Great Western Road, Aberdeen.
1928. WALKER, Rev. GEORGE A. EVERETT, Minister of Parish of Benholme, Manse of Benholme, Johnshaven, Montrose.
1937. WALKER, NINIAN, Solicitor, Commercial Bank Buildings, Dunfermline.
1920. WALKER, ROBERT J., M.A., 17 Pentland Crescent, Edinburgh, 10.
1938. WALKER, WILLIAM JAMES STIRLING, Ph.D. (Edin.), A.H.-W.C., F.I.C., F.R.S.E., 13 The Lawes, Lee Terrace, Blackheath, London, S.E. 3.
1936. WALLACE, DAVID SWAN, W.S., 6 Elton Terrace, Edinburgh, 4.
1928. WALLACE, JAMES, M.A., Rector of Vale of Leven Academy, "Glenleven," Alexandria, Dunbartonshire.
1936. WALLACE, Rev. WILLIAM ANGUS, The Manse of Guthrie, by Forfar.
- 1927.*WALLIS, W. CYRIL, Assistant Keeper, Art and Ethnographical Department, Royal Scottish Museum, 53 Spottiswoode Street, Edinburgh, 10.
1937. WARD, GUY ARTHUR, Genealogist, Olde Kiln, Grange Road, St Peter's-in-Thanel.
1919. WARB, The Very Rev. CHARLES LAING, C.V.O., M.A., D.D., Minister in St. Giles Cathedral, Dean of the Most Ancient and Most Noble Order of the Thistle, and Dean of the Chapel Royal in Scotland, 63 Northumberland Street, Edinburgh, 3.
1923. WARRACK, MALCOLM, 7 Oxford Terrace, Edinburgh, 4.
1932. WASON, C. R., Lecturer in Classical Archaeology in the University of Edinburgh, 18 Eglinton Crescent, Edinburgh, 12.
1916. WATSON, DAVID, R.E., Bridgend House, Brechin.
1924. WATERSTON, CHARLES B., 25 Howard Place, Edinburgh, 4.
1933. WATERSTON, Professor DAVID, M.A., M.D., F.R.C.S.E., Bute Professor of Anatomy, 5 Windmill Road, St Andrews, Fife.
1904. WATLING, H. STEWARD, Architect, Plas Conwy, Gogarth, Llandudno, N. Wales.
- 1907.*WATSON, CHARLES B. BOOG, F.R.S.E., 24 Garscube Terrace, Murrayfield, Edinburgh, 12.
1924. WATSON, GEORGE MACKIE, F.R.I.B.A., 50 Queen Street, Edinburgh, 2.
1913. WATSON, G. P. H., F.R.I.B.A., Royal Commission on Ancient and Historical Monuments of Scotland, 27 York Place, Edinburgh, 1.
1922. WATSON, HENRY MICHAEL DENNE, C.A., 12 Henderland Road, Murrayfield, Edinburgh, 12.
- 1927.*WATSON, JOHN HILL, of Grangehill, Beith, Ayrshire.
- 1908.*WATSON, JOHN PARKER, W.S., Greystane Kinellan Road, Murrayfield, Edinburgh, 12.
1930. WATSON, THOMAS WILLIAM, J.P., The Schoolhouse, Gullane.
- 1927.*WATSON, WILLIAM ELDER, O.B.E., J.P., Moray Bank, Elgin.
1912. WATSON, WILLIAM J., M.A., LL.D., D.Litt.Celt., F.R.S.E., Emeritus Professor of Celtic Languages, Literature and Antiquities, University of Edinburgh, 17 Merchiston Avenue, Edinburgh, 10.
1933. WATT, Rev. DOUGLAS W., M.A., The Manse of Pluscadden, Elgin.
- 1907.*WATT, JAMES, LL.D., W.S., F.F.A., 7 Blackford Road, Edinburgh, 9.
1908. WATT, The Very Rev. LAUCHLAN MACLEAN, M.A., B.D., D.D., LL.D., Kinloch, Lochcarron, Ross-shire.
- 1923.*WATT, WILLIAM J. C., M.B., Ch.B., 71 High Street, Paisley.
1937. WEDDERBURN, ERNEST MACLAGAN, M.A., LL.B., D.Sc., LL.D., Deputy Keeper of His Majesty's Signet, 6 Succoth Gardens, Edinburgh, 12.
- 1928.*WEIR, Rev. HAROLD GEORGE MULLO, M.A., The Manse, Dalry, Kirkcaldyshire.
1925. WEIR, JAMES MULLO, S.S.C., 21 Mayfield Terrace, Edinburgh, 9.
1939. WEIR, JOHN L., M.A., 153 West Regent Street, Glasgow, C. 2.
1927. WEIR, WALTER, 18 Cathkin Road, Langside, Glasgow, S. 2.

1926. WESTELL, W. PERCIVAL, F.L.S., F.R.S.A., Letchworth Public Museum, Town Square, Letchworth, Herts.
1932. WESTON, PERRY WILLIAM, F.R.E.S., F.R.G.S., F.R.H.S., F.C.S., F.Z.S., Villa Chapport, Tangier, Morocco.
1937. WESTWATER, ALEXANDER, Publisher, Station Road, Lochgelly, Fife.
1939. WHITE, JOHN, 18A Arthur Street, Edinburgh, 6.
1925. WHITE, WILLIAM, 28 Shore Road, Anstruther, Fife.
1928. WHITELAW, Rev. HERBERT A., High Church Manse, 2 Brighton Terrace, Craigmore, Rothesay, Bute.
1909. WHITTAKER, CHARLES RICHARD, F.R.C.S., F.R.S.E., Lyndwood, 27 Hatton Place, Edinburgh, 8.
1937. WIGHTMAN, A. STUART, F.R.A.I., F.Z.S., Melville Gardens, Bishopbriggs, Glasgow.
1897. WILLIAMS, H. MALLAM, J.P., Tilehurst, 34 Southern Road, West Southbourne, Bournemouth, Hants.
1930. WILSON, ARTHUR, J.P., 6 Saltoun Gardens, Glasgow, W. 2.
1935. WILSON, ARTHUR W., "Bannerdale," Venturefair Avenue, Dunfermline.
1933. WILSON, DAVID, A.R.I.A.S., 15 Prospect Bank Place, Leith, Edinburgh, 6.
1929. WILSON, GEORGE VICTOR, H.M. Geological Survey, 19 Grange Terrace, Edinburgh, 9.
1933. WILSON, JAMES PEARSON, Millbank, Privick Mill, Ayr.
1934. WILSON, Major MAURICE J. H., The Queen's Own Cameron Highlanders, Ashmore, Bridge of Cally, Perthshire.
1932. WILSON, P. DOUGLAS, M.Inst.C.E., 78 Comiston Drive, Edinburgh, 10.
- 1927.*WILSON, ROBERT, 139 Princes Street, Edinburgh, 2.
- 1923.*WILSON, Rev. S. GORDON F., M.A., B.Litt., A.K.C., F.R.Hist.S., Blean Vicarage, near Canterbury, Kent.
1913. WILSON, Rev. THOMAS, B.D., D.D., Flat 5, Meyrick Park Mansions, Bodorgan Road, Bournemouth.
1920. WISHART, DAVID, Pittarrow, Abernethy, Perthshire.
- 1934.*WISHART, FREDERICK, 632 King Street, Aberdeen.
1929. WOLFENDEN, WILLIAM, J.P., Cluny Villa, Kingussie, Inverness-shire.
1936. WOOD, WILLIAM HENRY, Missioner to the Deaf, 15 Kilburn, East Newport, Fife.
1930. WRIGHT, ALEXANDER, L.R.I.B.A., 7 Newton Terrace, Glasgow, C. 2.
1938. WRIGHT, Rev. RONALD SELBY, M.A., The Manse of the Canongate, Edinburgh, 8.
1927. WRIGHT, Rev. WILLIAM, M.A., B.D., Minister of the Parish of Wardlawhill, 21 Clincartill, Rutherglen.
1925. WYNESS, J. FENTON, A.R.I.B.A., A.I. Archts.Scot., 45 Salisbury Terrace, Aberdeen.
1938. YATES, Miss AGNES AITKEN, B.Sc., Greenvale, Ardbeg Road, Rothesay.
1937. YOUNG, Mrs H. NGUENT, 10 Onslow Court, Drayton Gardens, London, S.W. 10.
1933. YOUNG, ROBERT STOKER, J.P., Hon. Sheriff-Substitute of Fife and Kinross, Kinross.
1913. YOUNG, THOMAS E., W.S., Auchterarder.
1934. YOUNG, T. P. W., A.R.I.B.A. (Pilot-Officer, R.A.F.), 95 Bath Street, Glasgow, C. 2.
1937. YOUNG, WILLIAM ROSS, "Drumveigh," Barnton Avenue, Edinburgh, 4.
1929. YOUNGER, Mrs J. P., Arnsbrae, Cambus, Clackmannanshire.
- 1939.*YULE, BRIAN JOHN GEORGE, 25 Queen's Crescent, Edinburgh, 9.
- 1912.*YULE, THOMAS, W.S., 16 East Claremont Street, Edinburgh, 7.

CORRESPONDING MEMBERS

1927. ANDERSON, R. W., Whitestone Knowe, Peebles.
 1923. BLACK, GEORGE F., Ph.D., 325 Watson Avenue,
 Lyndhurst, New Jersey, U.S.A.
 1927. BRENNER, SIMON, Mid Town, Frieswick, Caithness.
 1928. FORTUNE, JOHN ROBERT, Airhouse, Oxtou,
 Betwicksire.
 1915. MATHIESON, JOHN, F.R.S.E., 42 East Claremont
 Street, Edinburgh, 7.
 1936. MOAR, PETER, Commission Agent, 4 Thurling
 Street, Lerwick, Shetland.
 1915. MORRISON, MURDO, Lakefield, Bragar, Lewis.
 1931. SMITH, SAMUEL, Mumrills, Laurieston, near
 Falkirk.
 1936. TAIT, DAVID, 14 Glendevon Place, Edinburgh, 12.
 1933. YORSTON, JAMES, Yorville, Rousay, Orkney.

HONORARY FELLOWS

1897. Sir W. M. FLINDERS PETRIE, D.C.L., LL.D., F.R.A., F.R.S., Emeritus Professor of Egyptology
 in University College, London, W.C. 1.
 1908. Sir ARTHUR JOHN EVANS, M.A., D.C.L., Youlbury, near Oxford.
 Professor H. DRAGENDORFF, Freiburg i. Baden, Johan von Weirthstrasse 4.
 1923. M. L'ABBÉ H. BREUIL, D.L.C., Professeur au Collège de France et à l'Institut de Paléontologie
 Humaine, Paris, 52 Avenue de la Motte Piquet, Paris, XV^e.
 Professor FRANZ CUMONT, 19 Corso d'Italia, Rome.
 Sir G. F. HILL, K.C.B., M.A., LL.D., F.R.A., Litt.D., F.S.A., 12 Sussex Place, Regent's Park,
 London, N.W. 1.
 FRANK GERALD SIMPSON, M.A., 44 Brompton Road, Carlisle.
 Mrs ARTHUR STRONG, C.B.E., Litt.D., LL.D., F.S.A., Life-Fellow of Girton College, Cambridge,
 and Assistant Director of the British School at Rome, 35 Via Balbo, Rome (22).
 A. M. TALLQVIST, Professor Universitetet, Helsingfors, Finland.
 1926. MARCELLIN BOULE, Professor in the Muséum National d'Histoire Naturelle, and Director of
 the Institut de Paléontologie Humaine, 1 rue René Panhard, boulevard Saint-Marcel, Paris 13^e.
 Professor Dr philos. A. W. BRUGGER, Bestyrer av Universitetets Oldsaksamling, Tullinløkken,
 Oslo, Norway.
 O. M. DALTON, M.A., F.R.A., Holford, Somerset.
 Professor Dr ERNST FABRICIUS, Geheimer Rat, Goethestrasse 44, Freiburg im Breisgau,
 Germany.
 Sir ARTHUR KEITH, M.D., D.Sc., LL.D., F.R.C.S. (Eng.), F.R.S., Conservator of the Museum
 and Hunterian Professor, Royal College of Surgeons of England; Past-President of the Royal
 Anthropological Institute of Great Britain and Ireland, and of the Anatomical Society.
 Master of the Buckston Browne Farm, Downe, Farnborough, Kent.
 Dr R. PARIBENI, Director of the Institute of Archaeology of Rome, Museo Nazionale Romano,
 Rome.

1927. DON HERMILIO ALCALDE DEL RIO, Torrelavega, Santander, Spain.
1931. Mrs M. E. CUNNINGTON, 33 Long Street, Devizes, Wiltshire.
Professor Dr ROBERT ZAHN, Direktor bei den Staatlichen Museen, Honorar-professor an der Universität, Am Lustgarten, Berlin. C.2.
1933. Professor Dr philos. HAAKON SHETELIG, Bergens Museums Oldsamlng, Bergen, Norway.
1935. Professor GERHARD BERSU, Zentralkonstruktion des Archäologischen Instituts des Deutschen Reiches, Woyrschstr. 30 c., Berlin, W. 35.
1939. Professor Dr ANDREAS ALFÖLDI, Pázmány-Universität, Múzeum-Korut 6-8, Budapest, VIII.
O. G. S. CRAWFORD, H.M. Ordnance Survey, Southampton.

LADY ASSOCIATE

1900. Professor Emeritus M. A. MURRAY, 18 Regents Terrace, Cambridge.

SOCIETIES, INSTITUTIONS, &c., EXCHANGING PUBLICATIONS.

- | | |
|---|---|
| <p>Architectural, Archaeological, and Historic Society of Chester and North Wales.</p> <p>Belfast Natural History and Philosophical Society.</p> <p>Derwicksire Naturalists' Club.</p> <p>Bristol and Gloucestershire Archaeological Society.</p> <p>Buchan Club.</p> <p>Buteshire Natural History Society.</p> <p>Cambrian Archaeological Association.</p> <p>Cambridge Antiquarian Society.</p> <p>Carmarthenshire Antiquarian Society.</p> <p>Courtauld Institute of Art.</p> <p>Cumberland and Westmorland Antiquarian and Archaeological Society.</p> <p>Derbysire Archaeological Society.</p> <p>Dumfriesshire Natural History and Antiquarian Society.</p> <p>Edinburgh Architectural Association.</p> <p>Edinburgh Geological Society.</p> <p>Elgin Literary and Scientific Society.</p> <p>Essex Archaeological Society.</p> <p>Gaelic Society of Inverness.</p> <p>Glasgow Archaeological Society.</p> <p>Hampshire Field Club and Archaeological Society.</p> <p>Hawick Archaeological Society.</p> <p>Historic Society of Lancashire and Cheshire.</p> <p>Institute of Archaeology, Liverpool.</p> <p>Kent Archaeological Society.</p> <p>Orkney Antiquarian Society, Kirkwall.</p> <p>Perthshire Society of Natural Science.</p> <p>Powys-land Club.</p> <p>Royal Anthropological Institute.</p> | <p>Royal Archaeological Institute of Great Britain and Ireland.</p> <p>Royal Commission on Ancient and Historical Monuments of Scotland.</p> <p>Royal Commission on the Ancient and Historical Monuments and Constructions in Wales and Monmouthshire.</p> <p>Royal Historical Society.</p> <p>Royal Institute of British Architects, London.</p> <p>Royal Irish Academy.</p> <p>Royal Numismatic Society.</p> <p>Royal Society of Antiquaries of Ireland.</p> <p>Scottish Ecclesiological Society.</p> <p>Shropshire Archaeological Society.</p> <p>Society for the Promotion of Roman Studies.</p> <p>Society of Antiquaries of London.</p> <p>Society of Antiquaries of Newcastle-upon-Tyne.</p> <p>Somersetshire Archaeological and Natural History Society.</p> <p>Stirling Natural History and Archaeological Society.</p> <p>Surrey Archaeological Society.</p> <p>Sussex Archaeological Society.</p> <p>Third Spalding Club.</p> <p>Viking Society for Northern Research.</p> <p>Wiltshire Archaeological Society.</p> <p>Yorkshire Archaeological Society.</p> |
|---|---|
- Archaeological Survey of India.
British School at Rome.

Colombo Museum, Ceylon.
 Royal Canadian Institute, Toronto.
 Royal Ontario Museum of Archaeology, Toronto, 5,
 Canada.
 University Museum, Dunedin, New Zealand.

FOREIGN SOCIETIES, UNIVERSITIES,
 MUSEUMS, &c.

Académie des Inscriptions et Belles Lettres, Paris.
 Académie des Sciences, Leningrad, U.S.S.R.
 Académie des Sciences d'Ukraine, Kieff.
 Académie Royale Serbe, Belgrade.
 Administration des Monuments, Riga, Latvia.
 Anthropologische Gesellschaft, Vienna, Ostmark,
 Germany.
 Antiquarische Gesellschaft, Zürich.
 Archaeological Institute of the Imperial University
 of Kyoto, Japan.
 Archaeologisches Institut D. Kön. Ung. Franz
 Joseph-Universität, Szeged, Hungary.
 Archaeologisches Institut der Pázmány Universität,
 Budapest.
 Archäologisches Institut des Deutschen Reiches
 Römisch-Germanische Kommission, Frankfurt
 am Main.
 Associació Catalana d'Antropologia, Etnologia i
 Prehistòria, Barcelona Universität, Spain.
 Bosnisch-Herzegovinisches Landes-Museum, Sara-
 jevo, Jugoslavia.
 Bureau of Ethnology, Washington.
 California University in Berkeley.
 Commissione Archeologica Comunale di Roma.
 Cornell University Library, Ithaca, New York.
 Cal. státní archeologický ústav (Institut archéolo-
 gique de l'Etat tchécoslovaque) Praha, Re-
 publika československá, Czechoslovakia.
 Department of Antiquities in Palestine, Jerusalem.
 Deutsch-ausländischer Buchtausch, Berlin.
 Ecole d'Anthropologie de Paris.
 Faculté des Sciences de Lyon.
 Field Museum of Natural History, Chicago.
 Foreningen til Norske Fortidsmindesterkers
 Bevaring.
 Göteborg och Bohuslänns Fornminnesföreningen.
 Göttingen University.
 Historische und Antiquarische Gesellschaft, Basel.
 Historischer Verein für Niedersachsen.
 Institut Archéologique Bulgare, Sofia.
 Institut de Paléontologie Humaine, Paris.
 Istituto Italiano di Antropologia, Roma.

Junta Superior de Excavaciones y Antigüedades,
 Madrid.
 Kiel University.
 Kongselige Norske Videnskabs Selskab, Trondhjem.
 Landesanstalt für Volksheilkunde, Halle a Saale,
 Saxony.
 Landesmuseum, Hannover.
 Landesmuseum Nassauischer Altertümer zu Wies-
 baden.
 Leipzig University.
 Musée Archéologique Ernie Majewski de la Société
 des Sciences de Varsovie, Poland.
 Musée d'Art et d'Histoire, Geneva, Switzerland.
 Musée Guimet, Paris.
 Musée National Suisse à Zurich.
 Museum, Bergen, Norway.
 Museum of Northern Antiquities, Oslo.
 National Bohemian Museum, Prague, Czecho-
 slovakia.
 National Museum, Zagreb, Yugoslavia.
 Nordiska Museet, Stockholm.
 Norsk Folkemuseum, Oslo, Norway.
 Oslo University, Norway.
 Peabody Museum, Cambridge, Mass., U.S.A.
 Prähistorische Kommission der Akademie der
 Wissenschaften in Wien, Ostmark, Germany.
 Prussia-Museum, Königsberg (P).
 Reale Accademia Nazionale dei Lincei, Rome.
 Rhein. Landesmuseum, Trier.
 Rijks-Museum van Oudheden, Leiden.
 Römisch-Germanischen Zentral Museum, Mainz,
 Germany.
 Royal Academy of History and Antiquities,
 Stockholm.
 Royal Society of Northern Antiquaries, Copenhagen.
 Schlesischer Altertumsverein, Breslau.
 Smithsonian Institution, Washington, U.S.A.
 Société d'Anthropologie de Paris.
 Société des Antiquaires de l'Ouest.
 Société Archéologique du Midi de la France.
 Société Archéologique de Montpellier.
 Société Archéologique de Moravie.
 Société Archéologique de Namur.
 Société des Bollandistes, Brussels.
 Société Finlandaise d'Archéologie, Helsingfors.
 Société d'Histoire et d'Archéologie de Gand.
 Société Nationale des Antiquaires de France.
 Société Préhistorique Française, Paris.
 Société Préhistorique Polonaise.
 Société Royale d'Archéologie, Bruxelles.
 Städtisches Museum für Völkerkunde, Leipzig.
 Stavanger Museum, Stavanger, Norway.

Türk Tarih Kurumu, Ankara, Turkey.
 University Library, Lund, Sweden.
 University Library, Tartu, Estonia.
 Upsala University.
 Verein für Nassauische Alterthumskunde, Wiesbaden.
 Verein von Alterthumsfreunden im Rheinlande, Bonn.
 Wiener Præhistorische Gesellschaft, Ostmark, Germany.

PERIODICALS.

L'Anthropologie, Paris.
Bulletin archéologique polonais, Warsaw.

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 Baillie's Institution, Glasgow.
 Bodleian Library, Oxford.
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 Chetham's Library, Manchester.
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 National Library of Wales, Aberystwyth.

Ordnance Survey Library, Southampton.
 Public Record Office Library, London.
 Royal Library, Windsor.
 Royal Scottish Museum Library, Edinburgh.
 Scottish National Portrait Gallery Library.
 Scottish Record Office, Historical Department.
 Signet Library, Edinburgh.
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 University Library, Aberdeen.
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 Bibliothèque d'Art et d'Archéologie, Université de Paris.
 National Library, Paris.
 National Library, Vienna.
 Newberry Library, Chicago, U.S.A.
 Preussische Staatsbibliothek, Berlin.
 Public Library, Hamburg.
 Royal Library, Copenhagen.
 Royal Library, Stockholm.
 Sächsische Landesbibliothek, Dresden.

SUBSCRIBING LIBRARIES, ETC.

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 Ashmolean Museum, Oxford.
 Birmingham Public Libraries—Reference Library.
 Carnegie United Kingdom Trust—The Scottish Central Library for Students, Dunfermline.
 Chicago University Libraries, Chicago, U.S.A.
 Cleveland Public Library, Ohio, U.S.A.
 *Columbia University.
 Department of British and Medieval Antiquities, British Museum.
 Detroit Public Library, Detroit, U.S.A.
 Dr Hay Fleming Library, The University, St Andrews.
 *Faculty of Procurators' Library, Glasgow.
 Falkirk Archaeological and Natural History Society.
 Free Public Library, Boston, Massachusetts, U.S.A.
 Harvard College, U.S.A.
 Henry E. Huntington Library and Art Gallery, San Marino, California, U.S.A.
 Institute of Accountants and Actuaries in Glasgow.
 Jeans College, Oxford.
 John Rylands Library, Manchester.
 Metropolitan Museum of Art, New York, U.S.A.

National Museum of Wales, Cardiff.
 New York Public Library, New York.
 Pennsylvania Historical Society, Philadelphia, U.S.A.
 Public Library, Aberdeen.
 Public Library, Dundee.
 Public Library of Victoria, Melbourne, Australia.
 Public Library, Civic Center, San Francisco, California, U.S.A.
 Reform Club, Pall Mall, London, S.W. 1.
 State Historical Society of Wisconsin, Madison, Wisconsin, U.S.A.
 *Stornoway Public Library, Island of Lewis.
 University College, Dublin.
 University Library, Durham.
 University Library, Leeds.
 University of London, W.C. 1.
 University of Manchester.
 University of Michigan, Ann Arbor.
 University of Minnesota, U.S.A.
 University of Pennsylvania, Philadelphia, Pa., U.S.A.
 Yale University Library, New Haven, Connecticut, U.S.A.

PROCEEDINGS

OF THE

SOCIETY OF ANTIQUARIES OF SCOTLAND

HUNDRED AND SIXTIETH SESSION, 1939-1940

The holding of meetings of the Society having been rendered impossible by the War, this Report has been drawn up in order to provide the Fellows with information on those aspects of the Society's affairs that are normally dealt with at the Anniversary Meeting.

Members of Council.—As stated in the circular letter sent to the Fellows on 23rd October 1939, the existing Council will remain in office until an opportunity for a fresh election presents itself. The List is as follows:—

President.

Sir GEORGE MACDONALD, K.C.B., LL.D., D.Litt., F.B.A.

Vice-Presidents.

Professor T. H. BRYCE, M.D., LL.D., F.R.S.

The Hon. LORD ST VIGEANS, LL.D.

ALEXANDER O. CURLE, C.V.O., LL.D.

Councillors.

Rev. WILLIAM BURNETT, B.D.

W. G. C. HANNA, O.B.E., C.A.

Sheriff C. H. BROWN, K.C.

WILLIAM ANGUS.

WILLIAM K. DICKSON, LL.D.

THOMAS YULE, W.S.

DAVID BAIRD SMITH, C.B.E., LL.D.

Professor D. TALBOT RICE, M.A., B.Sc.

Secretaries.

DOUGLAS P. MACLAGAN, W.S. ANGUS GRAHAM, M.A.

For Foreign Correspondence.

Professor V. GORDON CHILDE, D.Litt., D.Sc. | Professor W. M. CALDER, M.A., LL.D., F.B.A.

Treasurer.

J. BOLAM JOHNSON, C.A.

Curators of the Museum.

JAMES CURLE, LL.D., W.S. | JAMES S. RICHARDSON.

Curator of Coins.

ROBERT KERR, M.A.

Librarian.

MARRYAT R. DOBIE, B.A.(Oxon.).

Councillors ex-officio.

The Hon. Sir HEW H. DALRYMPLE, K.C.V.O., } *Representing the Board of*
KENNETH SANDERSON, W.S., } *Trustees.*
JOHN A. INGLIS, K.C., *representing the Treasury.*

The following were admitted as Fellows throughout the year: David Anderson; Miss Elizabeth H. M. Allan; M.A.; John Buyers, M.A.; Ivan B. M. Chalmers, M.A., LL.B.; William C. Clark; James M. Fairlie, S.Inst.C.E., G.I.Struct.E., A.M.Inst.W.; James Flett; Rev. John Greenlaw, T.D.; Rev. K. S. G. Greenlaw, M.A., C.F.; Thomas Grierson, J.P.; J. Stanley Holmes; Mrs. E. N. Kershaw, J.P.; Andrew McKerral, C.I.E., M.A., B.Sc.; Dr W. Menzies Menzies; Major Frank S. Perridge; Leslie G. Pine, B.A.(Lond.); Stewart Sim; Ian Armour Smith; Miss Olive M. Squair; Lord David Stuart; Edwin D. Sturrock; Henry Terrell; John White.

Honorary Fellow: O. G. S. Crawford.

The following Fellows have died during the year: James Buchan; Alexander Grahame Buchanan, M.B., Ch.B.; Peter Burgess; Sheriff John Macmaster Campbell; John D. Comrie, M.A., B.Sc., M.D., F.R.C.P.E.; Rev. Robert Coupar, B.D., D.D.; Major James Walls Cursiter; Edward Dwelly, F.S.G.; Sir Wallace Fairweather, D.L., J.P.; A. R. Galloway, O.B.E., M.A., M.B., C.M.; Brigadier-General Sir Robert Gilmour, Bart., C.B., C.V.O., D.S.O., of Craigmillar; James D. Gilruth, M.A., M.D., F.R.C.P.Ed.; James Grieve; John Gunn, M.A., D.Sc., F.R.S.G.S.; John M. Howden, C.A.; Harry R. G. Inglis; Arthur Kay, J.P., H.R.S.A.; Harry Lumsden, M.A., LL.B., LL.D., J.P.; Rev. William MacGillivray; John Mackay, S.S.C.; James McKelvie; Rev. John Macleod, C.B.E., Hon. C.F.; Rev. Alexander McPherson, B.D., Ph.D.; James McPherson; Robert Clark Morrison; Captain H. W. Murray; J. M. Murray; The Very Rev. Professor William P. Paterson, D.D., LL.D.; David Thomas Samson, D.L.; Robert Lyons Scott; Courtenay John Shiells, C.A.; W. N. Simpson; John Sinclair; John James Spencer; John H. Stevenson, M.B.E., K.C., Marchmont Herald; Charles Edward Whitelaw, F.R.I.A.S.

<i>Fellowship.</i> —The total number of Fellows on the roll at 30th November 1938 was	1018
At 30th November 1939 the number was	986
being a decrease of	32

The number of Fellows added to the roll during the year was 53, while 37 died, 32 resigned, and 14 allowed their membership to lapse. It is impossible to regard the effect of the War on the Society's membership without disquiet, and Fellows are again urged both to continue their own support of the Society and to do their utmost to obtain recruits.

Proceedings.—Volume LXXIII of the *Proceedings* contained 18 papers, of which 9 dealt with prehistoric and 9 with historical times. Fellows will have noted that some changes in the established *format* have been adopted in this volume, which is the first of the Seventh Series. These changes, the prime object of which was to reduce the crushing financial burden of our publications, were decided upon after mature consideration by the Council and in the light of a report on the technical aspect of the question prepared by a special committee presided over by Professor V. G. Childe. It is thought that the introduction of Notes at the end of the volume is a most useful innovation, as it will enable Fellows and others to put on record short descriptions of finds or observations that are unsuitable for presentation in the form of a paper.

The Museum.—The number of relics added to the Museum during the year amounted to 1154 by donation and 152 by purchase. As the Fellows have already been informed, the Museum was closed by order of the Board of Trustees on 1st September.

A start was made, prior to the outbreak of hostilities, in rearranging the collections, and it was planned to enhance their appeal by a new display of the more significant specimens combined with a more extensive use of maps, photographs, and models. It is hoped to continue this work as far as space permits after the end of the war.

The collections have been considerably augmented through the presentation by the Ancient Monuments Department of the Commissioners of His Majesty's Works of finds from various periods which had been recovered during their excavations of sites belonging to the Crown. A large number of relics found on guardianship sites have also been donated by the proprietors, through the Commissioners of His Majesty's Works.

Objects belonging to the prehistoric period are, as usual, the most numerous. Mr Walter G. Grant, F.S.A.Scot., has again presented a number of very important relics. These come from the excavation of a Stone Age Settlement at the Braes of Rinyo, Rousay, Orkney, and from

the neolithic cairn at Taiverso Tuick, Trumland, in the same island, where a new and intact chamber was recently discovered.

Additions to the Bronze Age collections are both numerous and important. They include a beaker from West Pinkerton, Dunbar, presented by His Grace The Duke of Roxburghe; a cinerary urn and another urn of unusual form from Outerston Hill, near Temple, Midlothian, presented by the Trustees of the Arniston Estate; a halberd blade, two socketed axes and a palstave, presented by Mr Alexander Keiller, F.S.A.Scot., and a bronze spear-head, presented by Major W. H. Doig, C.E., F.S.A.Scot. The greater portion of a jet necklace, found in a stone cist near Achcheargary Burn, Strathnaver, Sutherland, was presented by Mr W. Midwood.

Welcome additions to our Roman collections are an altar from Mumrills, given by Mr C. W. Forbes of Callendar, and the iron sword of an Auxiliary soldier from the Agricolan fort at Fendoch, given by Captain J. Drummond Moray.

Relics from the excavation of Iron Age Dwellings on the Calf of Eday, Orkney, have come from the late Major Harry H. Hebden, M.C., and Sir Edwyn Alexander Sinclair, G.C.B., C.V.O., LL.D., has presented, through Mr Alexander O. Curle, C.V.O., LL.D., F.S.A.Scot., the numerous and important objects found during the excavation of a Viking settlement at Freswick Links in Caithness.

We are again indebted to the liberality of the National Art-Collections Fund which has presented, through the "London Scot Bequest," a set of eighteen carved oak panels, known as "The Montrose Panels." These are Scottish in character, and belong to the late Gothic period. They are the best examples of such carving left in the country and are probably the remains of the dais panelling of the hall of a hospital founded in 1516 by Patrick Panter, Bishop of Ross and Abbot of Cambuskenneth. Among other objects belonging to the historic period, mention may be made of a silver-mounted charm-stone of rock crystal presented by Mr William and Mr Manby Gibson; a half-hour glass and two wine glasses which belonged to Sir Walter Scott, presented by Dr W. G. Aitchison Robertson, F.S.A.Scot.; a gold mourning-ring made in memory of Simon, Lord Lovat, who was executed in 1747, presented by Mr Thomas Yule, F.S.A.Scot., and an early sixteenth-century oak door from Mary of Guise's house in the Lawnmarket, presented by Mr Richard J. Simpson, F.S.A.Scot.

The most important and historically interesting purchase made during the year was "The Mary Queen of Scots Pendant," acquired with the aid of His Grace The Duke of Hamilton and of the National Art-Collections Fund. The Society are particularly indebted to His Grace, but for whose generous action this relic might easily have been lost to Scotland. It is a fine example of the work of a sixteenth-century French goldsmith and

was probably made for Mary Queen of Scots. Other notable purchases were a collection from two early Bronze Age kitchen middens at North Berwick and a primitive barbed harpoon-head of deer antler from Shewalton Moor.

The collection of Communion Tokens has been rearranged by Mr Robert Kerr, Curator of Coins, and there have been recently added to the collection nearly four hundred new specimens, selected by Mr John Lockie, one of our Fellows, from a bequest by the late Mrs McConnachie, Cottesbrook, Lauder, to the Royal Scottish Museum.

Two silver armlets and two finger-rings of silver, found in a peat moss in the parish of Barvas, Stornoway, Lewis, and a massive double-linked silver chain of the early Christian period, from Traprain Law, the seventh of a rare and peculiarly Scottish type, were obtained through the King's and Lord Treasurer's Remembrancer.

It is to be hoped that the inflow of acquisitions will be steadily maintained. Although they cannot be exhibited until happier times return, they will in the interval be scientifically classified and preserved from deterioration.

Excavations.—Grants for excavation were made to several members and the year's operations were completed before the outbreak of war. Extremely interesting structural remains were uncovered on some of the sites, and it is hoped that the excavators' reports will appear in the usual way in the present and subsequent volumes of the *Proceedings*.

The Library.—Additions to the Library amounted to 160 volumes, 138 having been acquired by donation and 22 by purchase. Over and above this total, a large number of publications of learned societies and institutions, British and foreign, have been received by way of exchange or subscription. The usual grant from His Majesty's Treasury has permitted the binding of 149 books.

The Gunning Fellowship.—The Gunning Fellowship for 1939 was awarded to Mr A. J. H. Edwards to enable him to visit museums in Denmark.

The Chalmers-Jervise Prize.—The district selected for the Chalmers-Jervise Essay was Perthshire, but no prize was awarded.

I.

SOME SCOTTISH CORE-TOOLS AND GROUND-FLAKED
IMPLEMENTS OF STONE. BY A. D. LACAILLE, F.S.A.Scot.

CORE-TOOLS.

In 1935 the writer laid before the Society a communication on some antiquities in the parish of Luss, Dumbartonshire. Reference was made to a sculptured rock situated in the lower reaches of Glen Finlas, $\frac{1}{4}$ mile south of Shegartan Farm and 3 furlongs north-west of Rosdhu mid-lodge.¹ Near this rock, lying approximately on the 150-ft. contour, in the ploughed field to the north, north-west, and west, were found flakes, chips, and a bifacially worked leaf-shaped arrow-head of quartz, the last now preserved in the National Museum (fig. 1, No. 1). Surmising from these discoveries, which were made incidentally after recording operations, that it was likely more relics might be found here, the field was searched on several later occasions with the result that enough artifacts have been collected to show that an industry had been practised in the vicinity. In addition to worked quartzes, which include scrapers, the surface yielded specimens manufactured in several other native rocks, such as a narrow ground chisel of diorite (fig. 1, No. 2), a small flat ground axe-head of schist (fig. 1, No. 3), flakes of diorite, epidiorite, and lamprophyre. The fracture-features of all these materials offer scope for special study, but for the purpose of this paper it suffices to draw attention to two tools made in hyaline quartz of rather indifferent quality.² The implements are types so far unrecorded in Scotland, but they may be compared to forms recognized by the author in collections from the Tweed valley. Not only so, but the Loch Lomondside specimens bear a striking likeness to certain tools occurring in Mesolithic, Neolithic, and even later contexts in some parts of the Continent and south-eastern England.

The two artifacts from Luss consist of short, thick flaked axe-like implements, almost identical in size and appearance. The resemblance between them is enhanced by the character of their cutting-edge, which is that of the typical tranchet-axe. In one specimen (fig. 1, No. 4), evidently fashioned in somewhat more tractable rock than its companion, the essential feature is well marked. There is no doubt that in the second instance (fig. 1, No. 5) the craftsman intended that the transverse blow should remove a larger flake at the base than the recalcitrant quartz allowed.

¹ *Proc. Soc. Ant. Scot.*, vol. lxxix, pp. 416-18.

² Technical features of this industry were discussed in my "Aspects of intentional fracture . . ." communicated to the Glasgow Archaeological Society on 19th December 1939, and to appear in the forthcoming volume of its *Transactions*.

Consequently, to achieve a perfectly efficient working-edge the end was treated by removing small squills. This method was also followed in the further trimming of the opposite face, and evidence of similar treatment appears on the accompanying artifact. Even in the more typical example (fig. 1, No. 4) the rock did not prove entirely responsive to primary flaking, as a pronounced lateral protuberance testifies.

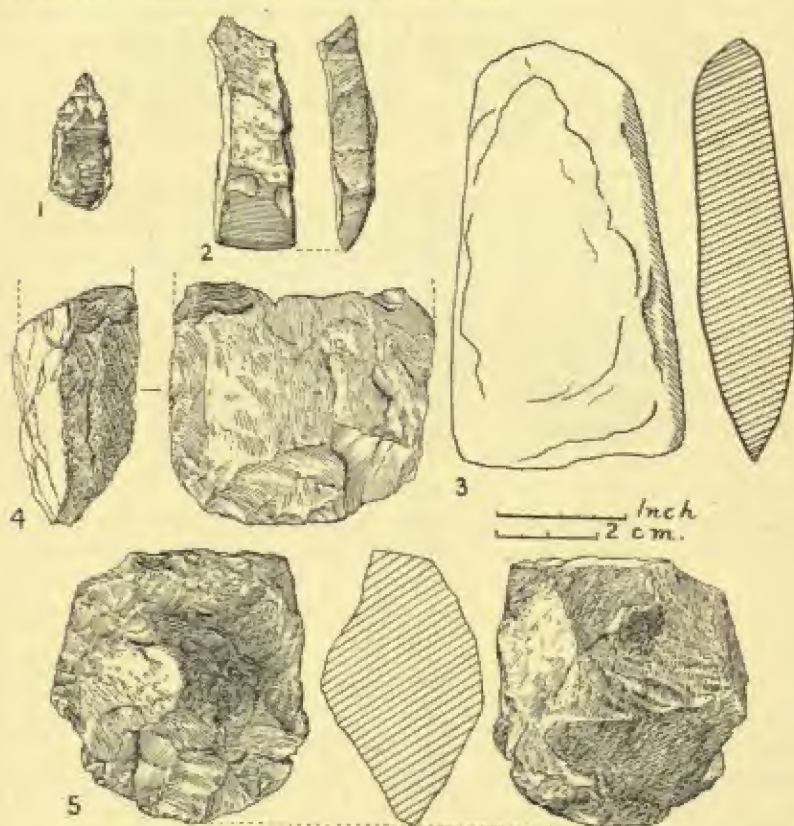


Fig. 1. Representative specimens of stone industry from Luss, Dumbartonshire.

Considering that these implements are manufactured in quartz, it is remarkable to find they may be referred to an important category of tools which were in vogue from Mesolithic times in Baltic lands, parts of Belgium, northern France, and south-eastern England. That the type long enjoyed favour is proved by innumerable French and English surface-finds.

So far as I know, core-axes have not been noted from the mainland territory north of County Durham (apart from specimens reported along the Solway Firth),¹ and for records nearer home one has to cross to Ireland.

¹ *Mem. Geological Survey of Great Britain: Carlisle, Longtown, and Silloth District*, 1920, p. 79.

The specimens described and other Scottish ones to be mentioned, if not large and strictly typical—probably due to the lack of suitable raw material—may reasonably be regarded as having some kinship with well-known implements which have their origin in the Forest Cultures. That in their Maglemose stage these made more than a mere superficial impression on Scotland is manifest in a number of bone artifacts, among which may be cited the very significant barbed point of deer-antler recently discovered at Shewalton.¹ The importance of this find can be appreciated when other relics of similar character from the West of Scotland are considered. Yet, the value of this point would be immeasurably enhanced were it possible to associate with it stone implements similar in facies to those of Clark's Period II Baltic culture.²

In the Luss stone tools we can at the moment only see a survival of the tradition into what, from artifact and other evidence, one assumes to be a local expression of Bronze Age craftsmanship. Nevertheless, these tranchets indicate that the Baltic culture had also definitely influenced Scottish stone industries, signs of which the writer thinks appear in an industry of the Kintyre raised beach. Whence or how this influence had penetrated into Loch Lomondside is a question to which an answer will doubtless come with future discoveries. An isolated instance in the form of a flaked flint fragment, seemingly of a core-axe or pick, from Ballantrae, Ayrshire, shown me a number of years ago by the Rev. Ian Muirhead, can only be brought up as a possible link with Irish flaked core-tools rather than as a hypothetical connexion with artifacts from a site on a route to and from the west (where worked bone relics exhibiting Baltic traits have been recognized), whose potentialities as a highway in prehistoric times remain to be examined from different angles.

As up till the present only surface-finds can be noted, the discoveries from Luss are reported to show that one more sort of stone implement can be included among the lithic products of this country. That kindred tool-types should appear in a region like Tweedside, which is prolific in other forms also having their origin in a Mesolithic and even earlier culture, is not altogether surprising, although the gaps are wide between the Border country and the nearest localities yielding allied pieces. The mixture of stone implements points to the varied needs of the folk who produced so many different kinds; but this diversity of artifacts, of archaic and advanced facies occurring in association, while increasing the interest of the Scottish stone industries, aggravates the problems which arise as to the penetration of the different types into the districts where examples have been discovered.

In facies, four specimens from the haughs of the Tweed, worked in

¹ A. D. Lacaille in *Proc. Soc. Ant. Scot.*, vol. lxxiii, pp. 48-50.

² *The Mesolithic Settlement of Northern Europe*, pp. 86 ff.

nodules, are apparently cognate to the tranchet forms from Dumbartonshire. Three may conceivably have served as hatchets, but they are to be distinguished from much bruised examples from Argyll raised-beach deposits noted by the Abbé H. Breuil in his classic contribution to our *Proceedings*.¹



Fig. 2. Core-tools from Tweeddale.

The character of two implements from the Tweed valley is immediately apparent, and, although slightly worn, they retain the keenness of edge given them by their manufacturers. The smaller (fig. 2, No. 1) of green chert was found near Dryburgh by our Fellow, Dr W. A. Munro. It possesses a cutting-edge formed by the intersection of two bezels, produced on the one face by delicate faceting and on the other by the skilful removal of a small transverse flake too. A larger and much thicker implement (fig. 2, No. 2), also collected by Dr Munro in the same district, is very

¹ Vol. lvi. p. 263 and fn.; also fig. 2, No. 18.

similar, only, the flaked bezel is backed against a convenient natural one which required no treatment. The rock, jaspilite, of which this artifact is made, responded well to the fairly bold flaking.

A third bifacial tool, larger than the foregoing, of green banded chert and found near Melrose by Mr C. J. Brown (fig. 2, No. 3), may justifiably be ranked as a core-axe, albeit inferior to most of the flint examples. Its lower end was treated in much the same way as the tools mentioned in preceding paragraphs. It is likely the nature of the material was found such that only comparatively small flakes could be removed from it in the blocking-out process. Another flaked artifact, in its appearance also recalling Maglemose implements, consists of a pointed core-tool of green chert from Dryburgh, now in Dr Munro's collection (fig. 2, No. 4). It may have served as an awl and, as a core-tool, is included in this series because of the character of the workmanship and its similarity to Danish implements regarded as its prototypes.¹ The sinuosity of the left edge was obtained by bold flaking, the clear definition and negatives of percussion indicating that a hammerstone was used to strike off flakes alternately from each face. An attempt would seem to have been made to dress the base whose edge is now injured, but the lateral margins and tip are intact. This implement may also be considered much as a hand-axe form, examples of which turn up occasionally in late contexts. The handiness of a tool of this sort and the many uses to which it could be put argue the long persistence of the type.

GROUND-FLAKED IMPLEMENTS.

Such is the scarcity of ground-flaked knives of flint in the British Isles that an addition to the list of 133 specimens compiled by Dr J. G. D. Clark² ought to be noted. That an example, bringing the total for Scotland up to fourteen, may be noticed, is due to the find by J. E. Elliot on Blackhaugh Farm, Stow, Selkirkshire, which is now preserved in Melrose as part of the St Mary's School collection. The specimen here figured (fig. 3, No. 1) is almost circular and is fashioned in grey flint. It measures $3\frac{1}{8}$ inches (0.08 m.) by $2\frac{15}{16}$ inches (0.075 m.) and $\frac{1}{32}$ inch (0.015 m.) in thickness. From the flake-scars on both faces, it appears that, fine and shallow as was the primary flaking which shaped the piece by means of a hammer softer than the flint—possibly of hardwood—it was followed by a more delicate removal of material. This operation was succeeded by the grinding of the two faces which smoothed down the ridges and provided the implement with a cutting-edge extending for quite two-thirds of a circle. The butt is noteworthy as consisting of a straight edge achieved by fine

¹ *E.g.* J. G. D. Clark, *op. cit. supra*, fig. 36, No. 8, p. 101.

² "Discoidal polished Flint Knives—their Typology and Distribution," in *Proc. Prehist. Soc. East Anglia*, vol. vi., pt. i., pp. 41-54.

retouches on both faces. In order to get rid of sharp corners the butt has been shouldered by careful necking, practised in such a way that the bevel of the scars occurs on one face. The bevels themselves bear evidence of having been dressed by most delicate retouching.

The Border counties have already yielded three comparable specimens, one each being recorded from Earlston, Coldstream, and Lauder, all in Berwickshire.

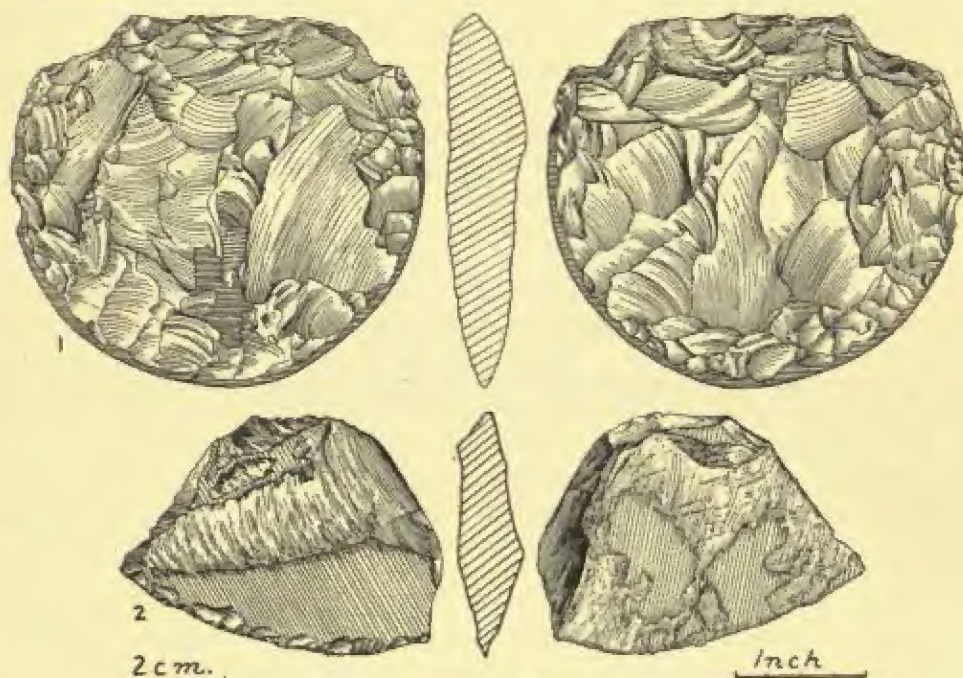


Fig. 3. Ground-flaked knives: 1. Stow, Selkirkshire; 2. Shewalton Moor, Ayrshire.

A small knife of light bluish-green Arran quartz-felsite (fig. 3, No. 2), found on Shewalton Moor, Ayrshire, is also illustrated as an example of a ground-flaked implement, the evidence of workmanship upon which presents an interesting contrast to that borne by the flint specimen from Blackhaugh Farm. The Ayrshire tool, $2\frac{1}{2}$ inches (0.0615 m.) long and $1\frac{1}{8}$ inch (0.043 m.) wide, consists of a flake one face whereof shows an inclined striking-platform and a pronounced swelling near the point where fell the blow detaching the piece from the core. This feature and a marked concavity on the other face indicate that this rock possesses some of the properties of conchoidal fracture. Grinding reduced the swelling and smoothed down the more protuberant parts of the separation surface, but the operation was not extensive as it left the original roughness in several

slightly sunken areas which expose the structure of the rock. The treatment, however, smoothed and sharpened the lateral margin of the flake. On the obverse this cutting-edge was delicately retouched, but, as the diminutive flake-scars prove, only *after* this surface had been ground to the edge and to remove irregularities and flake-ridges.

While we might comment on the attractive appearance of this specimen whose surface is relieved by numerous gleaming particles of quartz, technical aspects concern us here. To make the piece more symmetrical, a few flakes were detached from the end and side respectively opposite the striking-platform and cutting-edge. The steepness and contour so achieved, together with the conveniently abrupt platform, are such that the instrument fits snugly within the embrace of the bent index-finger of the right hand, and these features permit of the application of considerable pressure. Its thinness in section and angular plan would exclude the tool from the scraper class.

Any attempt at this stage to elaborate on what was written by Dr Clark on the subject of ground-flaked knives would be redundant; but it may be remembered he pointed out that wherever they occur there is also evidence of the Beaker-folk. This holds for the Scottish examples already found, but there is no report of beakers from Selkirkshire, although the characteristic pottery has been discovered in localities in adjacent counties not distant from the finding-place of the Blackhaugh Farm knife. Considering then the records of beakers from the Tweed valley, the possibility always remains that Selkirkshire will contribute its quota. In any case, this particularly beautiful implement is an addition to the map showing the distribution of the type.

The Shewalton specimen, despite small size and material, bears some comparison with ground-flaked flint knives of triangular shape, although in workmanship it seems inferior. It also evokes other considerations in view of the fact that the polishing applied on the edges of the Selkirkshire example causes the latter implement to be included in a definite category. In Ireland are found stone knives, the faces of which are polished, but not the edges. Now, the Shewalton implement was ground on both faces, and the polishing was deliberately removed afterwards along the edge of one face. Taking into account the known communication and trade existing in prehistoric times between northern Ireland and south-western Scotland, one is tempted to regard the specimen found on the sandy wastes of Shewalton Moor as an intermediate form. Its technical aspects may also be examined in view of a suggestion put to me in discussing the production of delicate Egyptian stone knives, namely, that the faces of the rough-out were finely ground in order that the subsequent flat minute faceting should run inward more readily in the finest of scales.

In respect of associations, the fact is well known that Shewalton Moor

has yielded a great variety of antiquities indicating long occupation. The Bronze Age is well represented, and in this connexion it must not be overlooked that the cutting-edge of the metal axe is recalled by that of the small knife. The author has picked up fragments of beaker pottery at Shewalton, and this ware has also been found at no great distance from the prolific sandy expanse near the mouth of the River Irvine.

In conclusion the writer wishes to express his indebtedness to Dr Munro and Mr Brown for having once more so generously placed collections of stone implements from Tweedside at his disposal, and for permitting him to figure examples which help to throw more light on Scottish lithic industries.

II.

NOTES ON SOME ANTIQUITIES FROM SUTHERLAND.

By J. M. DAVIDSON, O.B.E., F.S.A.Scot.

TWO BRONZE AGE CISTS AT ACHINCHANter, DORNOCH.

In December 1938 Mr Robert Gunn was deep ploughing on the farm of Achinchanter (Gaelic, *Auchen-chanter*, Field of the Precentor), Dornoch, when the plough-share struck and dislodged a large stone. On moving this from the track of the plough, he observed that it overlay a large block of sandstone, beneath one end of which he noticed a cavity. He continued his ploughing and it was not until the last week of the year that he was able to return to investigate, when, with the aid of a crowbar, he was able to move the large flagstone to one side. He then observed a rectangular stone cist, and, protruding through the infallen soil, certain bones. So he left the contents intact and reported the discovery to Mr H. M. Ross of the Sutherland Arms Hotel, the tenant of the farm, who in turn advised Mr John Campbell, Station House, who at once communicated by telephone with me.

I took an early opportunity to visit the site, and, with the cordial permission of Mr Ross and of Mr Thomas Adam, Factor to the Duke of Sutherland, the proprietor, I was enabled to investigate the discovery.

The site is on the north end of a crescentic-shaped moraine about 120 yards to the west of Dornoch Railway, as it emerges from the station some 350 yards to the south. The morainic deposit, of rough gravel, is known in Gaelic as *Cnoc-na-caorach* (Hill of the Sheep), and although its elevation is only about 60 feet above the level of the sea, it overlooks a wide stretch of sea and country from Tarbat Ness to Struie and Bonar on the south to Beinn a' Bhragie, with its monument to the Duke of Sutherland, on the north.

The sepulchral chamber was constructed of massive stone slabs vertically set, and measured 4 feet 1 inch long by 2 feet 1 inch broad inside. The cover was an irregularly shaped sandstone-conglomerate slab measuring about 4 feet 6 inches long and 3 feet broad at its widest part. The two sides and one end of the cist each consisted of a single flat stone, while the other end had a second stone keyed in at right angles. The interstices at the corners were carefully packed with rounded stones securely built in. The depth was about 2 feet 3 inches (Pl. I, 1).

The human remains found within the cist were scanty. The skull, of which portions were recovered together with part of the jawbone containing three teeth in position and a number of loose teeth, was found at the south-western end; the thigh bone and leg members were lying athwart the cist to the north-east. It was evident that the body had been placed in the chamber on its left side in a contracted position. The bones, other than those noted, were so decomposed as to make their removal quite impossible. I am indebted to Mr G. H. Edington, T.D., D.L., M.D., D.Sc., F.R.F.P.S., F.S.A.Scot., for his careful examination of the skeletal remains, and his detailed report is appended hereto.

The body had been placed on a bed of soft sand finely sifted and entirely free of pebbles. Beneath this layer was a gravel base, with considerable numbers of large rounded stones forming the bottom of the cist.

The contents of the cist were minutely sifted, but no relics came to light.

In clearing the ground to the north-east, a rough pavement of heavy stone boulders was encountered adjacent to the end slab of the chamber, and eventually the massive cap stone of a second cist was uncovered. This measured about 5 feet long, 4 feet wide and 5 inches thick, and required the combined efforts of five men to raise one side and to pivot it over. The cist (Pl. I, 2) was constructed in the same massive manner with large slabs, but the size in this case was smaller, the length being 3 feet 6 inches, while the width tapered from 28 to 21 inches.

The two cists differed, however, in more than size. In the first the two long side stones overlapped the end flags which were wedged between, whereas in the second the end stones projected beyond the larger side members. In cist No. 1 the longitudinal axis was level, and laterally the south-east side was $3\frac{1}{2}$ inches lower than the north-west slab. After the stones had been put in position the latter stone had been carefully trimmed to give an even top all along its edge, and both end stones were chipped to adjust the differences in level. This allowed the top stone to lie evenly with a slight slope down to the south-east. In the second cist, on the contrary, the north-west stone was concave on its top surface and the sides were carefully evened up with flat stones to give a level base for the cap-stone, no sign of chipping or trimming of the main members being



1. Cist No. 1 at Achinchanter showing trimming along edge of side slab.



2. Cist No. 2 at Achinchanter which contained food-vessel urn, etc.



1. Food vessel from Achinchanter cist.



2. Flint arrowhead from
Cist at Achinchanter.



3. Food-vessel urn from cist at Ascolmore.

J. M. DAVIDSON.



1. Two cists at Achinchanter, Dornoch.



2. Cup- and ring-marked stone at Duible, Sutherland.



Tumuli at Dalble, Sutherland.



1. Site of cist at Ascoilemore, Sutherland.



2. Crescent-shaped rampart and ditches on north side of mound containing cist at Ascoilemore.

detected in this instance. The result was that No. 1 tomb was comparatively dry, while the wall stones of No. 2 were discoloured by black streaks, as though from continued percolation of damp or acids from the soil. Confirmation of this was also obtained from the condition of the human remains within the chamber.

From the different methods employed in the construction of the cists, it was apparent that they had not been built by the same hands.

Except for the shadow-like remains shown by the discoloration of the sandy base of the tomb, the only visible evidence of the presence of human relics was the arc of the jawbone. The enamel of the teeth could be discerned in a similar position to that found in the first cist and the complete jaw was observed, though only faintly. Nothing tangible, however, could be recovered, as damp and decay had destroyed everything completely. Within $1\frac{1}{2}$ inch of the jawbone was found a barbed and tanged arrowhead of buff flint $1\frac{1}{4}$ inch long and 1 inch at its widest part over the barbs (Pl. II, 2). The flint greatly resembles that found on the Antrim Coast. This relic is a beautiful example, perfect in all its points, and is delicately serrated all along its angled edges.

In the north-west corner was wedged a small clay urn of the food-vessel type lying on its side, with the mouth tilted inwards. The vessel was already broken when the cist was opened and, due to its crumbling condition, it proved very difficult of removal, packed, as it was, around its exterior with rounded pebbles of about the size of the human fist between it and the side and end walls of the chamber. The base with part of the wall of the urn were recovered entire, and as every fragment of the vessel was found, its reconstruction did not appear to present insuperable difficulty.

In fact this was later successfully accomplished by Dr Stuart M. K. Henderson, Curator of the Archæological Collection at Kelvingrove Art Galleries, Glasgow, to whom cordial thanks are due.

The vessel (Pl. II, 1) is of the vase type, made of a dark brownish clay mixed with coarse pebbly grit. Below a thick rim is a rounded neck groove, and beneath this a narrow U-shaped "string" groove interrupted by five unpierced stops. Below a third narrow channel the walls of the vessel swell out to the same diameter as the rim, and from this point taper down to a small flat base. The rim has a slight inward bevel and is ornamented with chevron markings, which also cover the whole exterior. The decoration is in rows round the upper half of the bowl, and about half an inch below the bottom groove on the upper tapered portion of the urn two uneven lines have been rudely scored around. Below these the chevrons are applied in vertical rows.

The chief dimensions of the vessel are: height, $5\frac{1}{2}$ inches; maximum diameter, $6\frac{1}{2}$ inches; depth of rim, $\frac{1}{2}$ inch; inside diameter at lip, 5 inches;

depth of neck grooves, 1 inch, $\frac{3}{8}$ inch, and $\frac{3}{8}$ inch; diameter of base, 3 inches; thickness of walls, $\frac{2}{16}$ inch.

Messrs J. F. Hyslop and A. M'Murdo of the scientific staff of Messrs John G. Stein & Co., Ltd., Castlecary, were good enough to examine small pieces of the wall of the vessel, and reported:

"X-ray examination of the outside brown layer and of the interior of a small portion of urn from Dornoch.

"The constituents are: quartz; kaolinite; pyrophyllite or tale.

"The presence of these minerals indicates that the urn was unburned, or else burned at some low temperature—say, 500° C.

"The crystals present in the specimens are large, and the mineral association indicates that the source of the raw material was probably some broken-down metamorphic rock. It is too much to assume that the pyrophyllite or tale was added to clay.

"Ceramically, the two features of the urn are:

- (a) It is unfired in the ceramic sense, since the original minerals are not decomposed.
- (b) the composition is specific, as is shown by the presence of the taleose mineral."

At the same end of the cist was found a small fragment of bronze $\frac{1}{2}$ inch long and about $\frac{1}{16}$ inch in diameter, suggestive of part of a pin. The remainder had apparently completely disintegrated.

All of the stones forming the two cists (Pl. III, 1) were of sandstone conglomerate and apparently emanated from one of two quarries on Dornoch Links, but as these are $\frac{3}{4}$ mile distant as the crow flies, the labour involved in transporting these massive slabs must have been considerable, particularly as the moraine itself presents a fairly steep incline from any direction.

The two cists were not orientated in the same direction, there being a difference of 18° in the setting of their long central axes. The first tomb was set at 124° east of North Magnetic, and it was noted that the medial line was directed exactly to that point on the horizon where the sun set at the Winter Solstice. At another Bronze Age burial in Lanarkshire,¹ the cist was found to be aligned to the setting sun at midsummer. At Achinchanter it was further observed that the continuation of the central axis of the first cist to the north-east pointed to the centre of the cairn at Embo Street² almost one mile distant.

From the presence of many large rounded stones, apparently not native to the moraine, ploughed up to the surface, it seems clear that the burial-ground had at one time been covered by a cairn. Neighbouring dry-stone dykes have probably been built from this source, as well as farm buildings,

¹ *Trans. Glasgow Arch. Soc.*, vol. ix, part iv, "A Bronze Age Cemetery at Springhill Farm, Baillieston, near Glasgow."

² *Inventory of Monuments in Sutherland*, p. 48, No. 137.

till nothing is now left to indicate its presence other than such boulders as the plough has raised to the surface. Cultivation, followed by heavy rains, has caused the top of the mound to be much denuded, and the cap-stones of the cists are not now more than a few inches below the plough furrow.

Grateful acknowledgment is made to Mr John Campbell for his assistance as well as for the provision of tools and protective shelter on the site during trying wintry conditions.

REPORT ON BONES FROM BRONZE AGE CIST AT DORNOCH SUBMITTED BY MR J. M. DAVIDSON. By Mr G. H. EDINGTON, T.D., D.L., M.D., D.Sc., F.R.F.P.S.G., J.P., Consultant Surgeon, Western Infirmary, Glasgow.

1. Package marked "leg or thigh bones" contains one or two fragments of long bone. The largest is $2\frac{1}{2}$ inches long and consists of two separate pieces which incompletely surround marrow cavity, so that it is plainly visible through a gap— $\frac{1}{2}$ inch across. The inner surface of the two pieces (marrow surface) is irregularly granular. The outer surface of the fragments presents appearance as if outer layers had partly desquamated; the line of junction of the fragments is linear and slightly sinuous.

2. Fragment $1\frac{1}{2}$ inch long, $\frac{1}{2}$ inch wide.

3. Fragment 2 inches long, $\frac{1}{2}$ inch wide.

The outer surface of all three shows longitudinal furrowing or fluting and without the hard, smooth surface of more modern bones.

4. Fragment $2\frac{1}{2}$ inches \times $\frac{1}{2}$ inch. Marrow cavity fully exposed from end to end of fragment. The characters of inner and outer surfaces correspond with those found in 1, 2, and 3. The large fragments 1 to 4 are suggestive of a slender tibia, or of a humerus of proportions found in a modern bone. The fragments, and to a lesser degree the smaller remains, sparkle in artificial light as from crystalline bodies: the prevailing colour is earthy brown. The fragments tend to split and break, no matter how delicately they be handled.

5. This contains dust and small flakes and particles of bone. One fragment measuring $1\frac{1}{2}$ inch \times $\frac{1}{2}$ inch is fairly flat on one face and rough on other surface. Its other two sides both show depressions suggesting naturally formed cavities such as occur in the upper jaw.

FRAGMENTS OF SKULL.

6. Upper jaw from left side, 2 molars in sockets. Right side ill-preserved. The 2 molars are well-preserved, also the most of hard palate; front part is wanting.

7. Fragment of left side of front part of base of skull: chiefly sphenoid.

Looked at from behind: The groove for meningeal artery is seen on attached piece of temporal bone and the latter's line of junction with sphenoid is in front of that.

8. Petrous portion of right temporal bone, showing opening for auditory nerve.

9. Fragment of right side front part of base of skull (*cf.* 7 *supra*). Foramen for optic nerve seen.

10. Under part of sphenoid showing large sphenoidal cells; and on either side of back (rostrum) the roof of nasopharynx.

11. Large fragment of vault of skull attached by suture to smaller piece. Probably parietal bone. Difficult to fix accurately. Shows grooves for meningeal artery. Smaller piece (?) Occipital bone, average thickness $\frac{1}{8}$ inch.

12. Small fragment is at junction of three bones, left parietal, sphenoid, and temporal.

17th January 1939.

SCULPTURED STONE FROM EMBO STREET, DORNOCH.

In January 1933, along with Mr Ludovic McL. Mann I visited the cairn at Embo Street, which is now much overgrown with whins. A cist is exposed with the top slab lying across the east end and within I found a stone with a curious device cut thereon. I was inside the chamber scraping away moss and earth in a search for cup-marks, or other relics which might have escaped the observation of those who originally opened the cist, when I came across, among the debris at the bottom, a flat sandstone about 18 inches long and tapering from 15 inches broad to a rounded

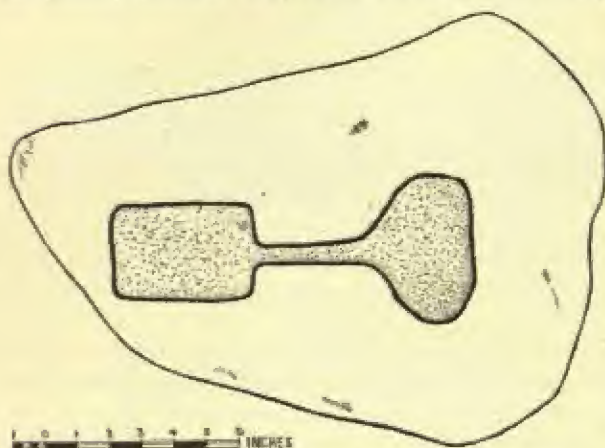


Fig. 1. Sculptured Stone from Cist at Embo Street.

point, with a mark cut out in it (fig. 1). The symbol suggests the form of a much-shortened spade with a greatly exaggerated handle: that is, two large unequal broad ends connected by a thin central web. It is about 11 inches long and $4\frac{1}{2}$ inches wide and has been cut out to a depth of about $\frac{1}{4}$ inch. In shape it much resembles one cut on the vertical rock face on the Jemez Plateau, near the Rito de los Frigoles, New Mexico, where, at the Tufa Rock Dwellings, in the Pajarito Park, a somewhat similar device appears in conjunction with cups and rings and other sculpturings.

The cist cover at Embo Street is recorded as one of the comparatively few examples known to have cups cut thereon, there being one large cup on the underside.

CUP-MARKED STONES AT DUBBLE, SUTHERLAND.

Thanks are due to Mr Wm. McLeod, Suisgill, Kildonan, for bringing to notice the two cup stones here recorded. The first is a large isolated erratic

of schist with wide laminations of quartz, situated on the southern ridge of Beinn Dubhain at a point east of the Duible Burn, some 350 feet above the level of the Kildonan road and about $1\frac{1}{2}$ mile south-east of Kildonan Church. The boulder measures about 8 feet long and 4 feet wide, and it stands some 3 feet above the level of the turf. Locally it is known as the "Maiden's Rock" and it is a comparatively prominent object in the moorland plateau, as few stones there protrude above the heather.

The stone slopes down to the south, and on the highest part of it to the north-east three cups are cut out with their centres in exact alignment. The cup at the north-east end is well made, measuring $3\frac{1}{2}$ inches in diameter and 3 inches deep. The other two, the central one at about 2 inches diameter and the other which is elliptical, are comparatively shallow. The distances apart of their centres from the central cup are $4\frac{1}{4}$ inches and $2\frac{1}{2}$ inches respectively.

The second set of cup markings was discovered by Mr McLeod when shooting over the moorland in 1933. He dropped a cartridge and on stooping to recover it brushed aside the heather with his foot and noticed a little ring of moss. Struck by the odd formation, he examined more closely and uncovered the sculptured surface of a flat stone, pentagonal in shape, measuring about 24 inches across. The stone is about 6 inches thick and is of a hard, close-grained, micaceous schist.

Mr McLeod had cut out the stone from its position in the clay on the hillside and had cleaned it and propped it up for my inspection. Originally it had been lying level with the ground with only its sculptured face exposed.

The site is about 50 yards west of the Duible Burn, a little mountain stream which flows into the river Helmsdale a quarter of a mile east of the confluence of that river and the Craggie Burn, one mile east of Kildonan Church. The elevation is about 500 feet above sea-level.

In the small area of about $3\frac{1}{2}$ square feet there are fourteen cups cut in the stone, two of them being considerably larger than the others at $3\frac{3}{4}$ inches and $3\frac{1}{4}$ inches in diameter respectively, and each of these two cups is almost surrounded by a concentric ring 1 inch wide. Both of these cups are unusual in that they are flat bottomed at about $1\frac{1}{4}$ inch in depth. The rings measure $6\frac{3}{4}$ inches and 6 inches in their mean diameters and they are open to allow a straight gutter emanating from single small cups to pass through to the larger ones (Pl. III, 2).

The remaining cups vary from $2\frac{1}{2}$ inches to $\frac{3}{4}$ inch in diameter, some of them being quite shallow. Five of these have single gutters cut into them and one has two channels. Four—two of them $1\frac{1}{2}$ inch in diameter and two at $\frac{3}{4}$ inch in diameter—are simple cups.

The site on which this stone was found is interesting, because of the large number of tumuli in the immediate neighbourhood. The moorland is the property of Brigadier-General G. C. B. Paynter, C.M.G., C.V.O.,

D.S.O., Suisgill Lodge, Sutherland, who was good enough to allow me to investigate some of them.

TUMULI AT DUBBLE, SUTHERLAND.

The site is singularly impressive in that there are about sixty tumuli in an area of a few acres. In general they range about 20 feet in diameter and from 2 to 3 feet in height. I chose three (Pl. IV) from amongst them, two of them because of their apparent perfection of form and height and the third because of its proximity to the cup- and ring-marked stone. I excavated these, but found no evidence of them having any connection with burials. From a close and intimate survey I was driven to the reluctant conclusion that they were merely heaps of land-gathered stones, carefully collected into these little cairns and compactly built up to conserve what little land there was suitable for cultivation. The rock surface never appeared to be very far down, and the attempt to eke out an existence in a cold and mountainous countryside must have caused a frugal peasantry to endeavour to snatch a living through cultivation of this fairly level high ground. In Sutherland I frequently found these cairns on high ground and, moreover, on comparatively level ground. On the high land to the east of this site, where there was a notable absence of stones, there were to be seen cultivation rigs now long, apparently, out of use.

No cairns were noticed in the lower ground bordering the Helmsdale River. The land is alluvial and overpopulation of that more favoured soil or temporary flooding may have driven the inhabitants to the more inhospitable heights as a temporary resort, but no hut circles were observed in the immediate neighbourhood of the cairn-field.

Locally I ascertained that, while at various times some stones had been removed from the cairns in an attempt to find a central cist, nothing of that nature had ever been found in them.

CARVED STONE BALL FROM GOLSPIE.

In 1933 Dr James B. Simpson of Golspie reported to me the finding of a carved stone ball (fig. 2) turned up during ploughing operations on the farm of Golspie Towers.

The ball is of grey porphyrite and shows on its surface small vesicles caused by gas bubbles. It has six prominent protuberances in high relief almost identical in size at 1.7 inch diameter and hemispherical in shape. The overall size equals two knob-diameters or 3.2 inches. Round the base of each boss a slight wear is noticeable, the stone being undercut to a small degree as though through continued friction of a cord or thong. Its weight is $17\frac{3}{4}$ oz.

The ball is in a fine state of preservation, all of the protuberances, except one which is slightly chipped, being in perfect condition. In its balance and symmetry it conveys the impression of a clever example of stone-cutting craftsmanship.

BRONZE AGE CIST AT ASCOILEMORE, BRORA.

On Saturday evening 15th July, 1939, I was advised by telephone of the discovery of a stone cist near Brora and was invited to investigate it. I therefore travelled north the following day, and in Inverness met Mr John Sutherland, Dornoch, factor of the Ascoile Estate, who informed me how to reach the spot and gave me the necessary permits to explore the site on behalf of Walter P. Tyser, Esq., of Gordonbush Lodge, the proprietor.

Ascoilemore, in the Parish of Clyne, is almost exactly 8 miles by road north-west of Brora, on the north side of the river. The site of the cist was in a little morainic mound (Pl. V, 1) about 10 feet in height situated on the northern edge of the meadowland adjoining the river and some 94 yards north of the road which traverses the Strath. It lies about 1100 yards east of the junction of the Black Water and the Brora River. About 900 yards farther east a modern road bridge spans the Allt Ach'nam Bathaich Burn before its discharge into the Brora River.

The mound itself is noteworthy in that it presents the appearance of a defensive earthwork with a flat top measuring some 83 feet in diameter. It is protected on its northern side by a rampart, 22 feet wide at the bottom, with a ditch on either side (Pl. V, 2). The inner ditch is 28 feet wide at the top and measures 5 feet deep, while the outer ditch is 12 feet wide. The rampart and ditches are crescent-shaped. The elevation is approximately 110 feet above sea-level. The hillock has been cut into for road-surfacing material and consists of a mixture of coarse sand and gravel with occasional large broken boulders. A certain amount of clay material is found intermingled in its structure.

Practically the entire centre of the mound had been removed when the stone side-slab of a structure became revealed with a large flat stone resting on its upper edge. A cavity disclosed between the top stone and the side-slab proved too great a temptation to an errant workman who, unknown to

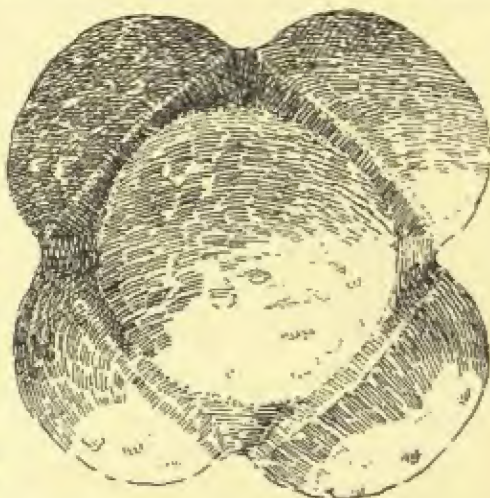


Fig. 2. Carved Stone Ball from Golaspie, Sutherland.

his fellow-workers, prised the side-slab out, and in doing so wrecked the cist. The urn, intact, he took away and kept it wrapped in a handkerchief in the roadworkers' travelling bothy.

The cist, therefore, was in this condition on my arrival, and I could do little but sift carefully the material from the bottom of the grave and take such particulars as its ruinous condition would permit.

The top slab, measuring 3 feet 6 inches long, 24 inches wide, and 6 inches thick, of blue whinstone was still in position, the upper surface being 2 feet below the grass level. The only other stone left intact was the south side-slab, of well-dressed white sandstone 3 feet long, 20 inches deep, and 3 inches thick. The displaced end-slabs measured about 21 inches long, 14 inches deep, and 3 inches thick. These end-slabs had been wedged from behind with smaller broken boulders, and the corners were similarly packed with small stones. The interior dimensions of the cist must have been about 3 feet long, 18 inches wide, and 18 inches deep. The long axis of the chamber was approximately 50° east of North Magnetic.

The bottom of the cist was concave and had been lined with a deposit of clay in which pebbles had been set, thus forming a hard solid floor. Within this bowl-shaped depression, which was 6 inches deep, was a deposit of fine sifted sand and gravel filling up the hollow in the cist to a level bottom. No relics were found.

On recovery, the fabric of the urn was found to be deteriorating, a serious crack having developed and a flaking of the surface being apparent. The workman agreed that it was disintegrating rapidly since he had found it, and no difficulty was experienced in persuading him to relinquish control of the vessel in order that it might be chemically treated with a preservative. This was undertaken with complete success by Dr Stuart M. K. Henderson of Glasgow.

The urn (Pl. II, 3) is a squat little vessel of fine clay, reddish brown in colour with little air vesicles showing on the outer surface. It has a flat base $2\frac{5}{8}$ inches in diameter, and in its rather unsymmetrical form it is somewhat crudely and obviously hand-made.

Its principal dimensions are: height, $3\frac{7}{8}$ inches; maximum diameter, $4\frac{5}{8}$ inches outside lip; interior diameter, $3\frac{5}{8}$ inches.

The inside of the base is slightly convex and the walls of the vessel are about $\frac{1}{2}$ inch in thickness, narrowing at the everted lip to form a wide mouth.

The vessel was quite clean inside when received, but in reply to a query as to whether anything had been found in it I was assured there was "only dirt." It transpired that, before the cist was forced, a stick was probed about the interior through the top cavity and on withdrawal the end was found to have a black, somewhat sticky substance adhering to it which was thought to have come from the urn.

Brora Loch is dominated by the mountains Col-bheinn and Ben Horn to the north and south respectively, both rising to over 1700 feet. The Strath between, in which are situated both loch and roadway, contains the only pastoral land in the district, and in this narrow strip settlements and burial places appear to have been not infrequent.¹ At Killin, at the junction of the east and middle portions of the loch and on its eastern edge, human remains were found in 1865, and in that same vicinity, within 300 yards, on the north side of the road, similar discoveries were recorded in 1810. About 170 yards due east of the road and north of the Allt nam Ban Burn at its entrance to Loch Brora, two urns were found in 1871, while at the Old-town Kennels, beside the site of St Columba's Chapel and immediately adjacent to the road, large human bones were discovered in 1815. About 900 yards north-west of the Ascoilemore site is a cairn ² at a height of about 500 feet on Balmacoil Hill. Mounds of the type already mentioned abound as well as hut-circles and cairns, but, probably due to the remoteness of the sites, very few have been explored in any way.

III.

THE SO-CALLED HEEL-SHAPED CAIRNS OF SHETLAND, WITH REMARKS ON THE CHAMBERED TOMBS OF ORKNEY AND SHETLAND. BY T. H. BRYCE, M.D., LL.D., F.R.S.*

The contrast between the islands of the Orkney group and those of the Shetland group in topography and geology attracts the attention of the most casual traveller. The contrast in the characters of the chambered cairns is quite as striking to the student of the prehistoric monuments.

In the Orkney Islands the chambered tombs, broadly speaking, fall into two classes, corridor tombs (so-called stalled cairns) and chambered tombs proper. All are passage tombs in the sense that the chamber, whether in the form of a gallery with lateral recesses or of a main chamber with cells opening from it, is entered by a passage. In only one instance out of two which in outward form resemble the long-horned cairns of Caithness has it been demonstrated by excavation that the passage opened from a frontal bay or forecourt defined by horns. In no case has any tomb been shown to have a frontal arc of orthostats, whether standing apart in series or united by panels of masonry and only a portal of entrance. Although the scanty grave-goods do not provide any evidence of a local chronological sequence in either class of monument, there is a general

¹ *Ord. Survey Sutherland*, 2nd ed., 1907, Sheets lxxxvii and xcvii.

² *Inventory of Monuments in Sutherland*, p. 17, No. 42.

suggestion of evolution, of the first class into the immense corridor tomb on the Holm of Papa Westray, and of the second class into the wonderful *tholos* tomb of Maeshowe.

There are many examples of ruined monuments of the corridor or stalled type, but there are none which suggest devolution or gradual degeneration.¹ In this respect conditions in the Orkney Islands contrast with those in certain other areas in Scotland.²

In the Shetland Islands great funerary monuments such as occur in the Orkneys are nowhere to be seen. Only a relatively small number of chambered cairns exist, and all exhibit, by comparison with the Orkney tombs, features which suggest degeneration, combined, however, with others which might be regarded as archaic.

A tomb on the summit of Ronas Hill, in the parish of Northmaven, is definitely a degenerate chambered tomb; indeed it represents what may be regarded as the terminal phase of decadence. It consists of a small rectangular chamber under a cairn, which might be termed a large cist were it not that a short lintelled passage indicates its claim to be considered a vault for successive interments.

A more interesting type of monument was discovered by the staff of the Ancient Monuments Commission during their survey of Shetland. Mr Charles Calder and the late Mr J. M. Corrie recognised a type of chambered cairn not known before, nor observed outside of Shetland, to which the name of heel-shaped cairn was given because its outline resembles the imprint of the heel of a boot. Only two examples retain most of what may be termed typical features. The remainder are represented by ruinous structures, or merely by groups of stones which would have been unintelligible but for the existence of the more complete monuments. Unfortunately all the chambers have been rifled of their contents. The virtual absence of relics lessens the interest of this local type of chambered tomb, but its peculiar structural features are themselves worthy of description, because of the striking contrast they present to those of the Orkney cairns, and because of some general questions which they raise. The present account is all that is possible until such time as the spade in the hands of competent observers reaches the very remote localities where they are situated.

Of the less ruined monuments of the class the cairn at Punds Water, near Mangaster, in the parish of Northmaven, is the largest and perhaps the most normal: the other, situated in the small uninhabited island of Vementry on the greatly eroded northern shore of the Walls-Sandsting

¹ The small chamber B in the cairn on the Calf of Eday (*Proc. Soc. Ant. Scot.*, vol. lxxi, p. 115), excavated by Mr Charles Calder, although it is reduced in size has all the features of the typical tomb.

² *E.g.* the Clyde area, where a definite typological descending series can be recognised substantiated by associated relics. V. *The Book of Arran*, vol. i, Archaeology, 1910, pp. 136-141.

peninsula, is more perfect, but at the same time more unusual in its characters.

The *Punds Water Cairn* (fig. 1) consists of large white granitic boulders, measuring on the average about 2 feet by 1 foot, and it rises some 5 feet above the surface of the hillock on which it stands, high up on the shoulder of a hill. In the heart of the mass of stones is a roofless and rifled chamber, with a passage also open to the sky. The cairn is considerably "spread," but all round its periphery the foundations of an outer wall-face can be traced in the fallen material. On the eastern side of the cairn the walling forms a long, very slightly concave, frontal façade pierced at its central point by a portal leading into the passage. Several courses of the frontal wall survive in its northern half, but the southern portion is less well preserved and the southern corner is ruinous.

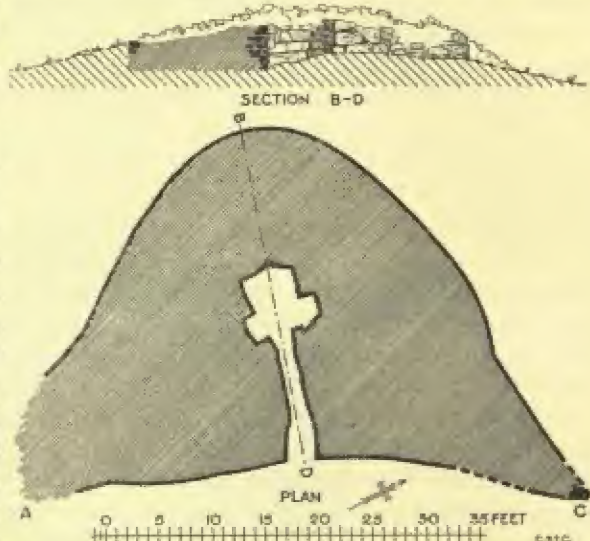


Fig. 1. Heel-shaped Cairn, Punds Water.

The façade measures over 50 feet in length, and as this exceeds the breadth of the cairn behind, it follows that the frontal wall at its extremities returns into the peristalith setting at an acute angle at each end. The horns in which the façade thus terminates were originally, as we may conclude from other examples, marked by upright stones. Of these only one survives, at the northern horn, and standing as it does 4 feet 9 inches high it forms a prominent feature of the monument which is not otherwise orthostatic.

The ground plan of the cairn is thus somewhat triangular, with a base 50 feet long and a rounded apex which is 32 feet distant from the centre of the façade, a distance little more than half the span between the horns. Here the frontal walling is pierced, as already stated, by the external opening of the passage leading into the chamber. The passage is 12 feet long and 2 feet 6 inches wide, contracting about the middle of its length to 1 foot 5 inches. Its walls are faced with coursed masonry, and slabs are not used; the same is true of the chamber into which the passage opens. This has the shape of a trefoil in plan, having three recesses, two lateral and a terminal, which is the largest. The whole chamber measures only 6 feet in length, and in breadth 7 feet, measured from the back of one

transeptal recess to the back of the other. The walls are carefully built in courses and still stand 4 feet 9 inches high. They are vertical without inward inclination or corbelling, and all the angles are sharp, not rounded.

The Vementry Cairn (fig. 2 and Pl. VI) stands at the north-west corner of the island on the top of a hill, which rises 298 feet above the sea at its base. It occupies practically the whole breadth of a ridge near the summit of the hill, and is placed with its morphological axis across the ridge. The ground falls away steeply both at the back of the cairn and in front of the façade, so that any area which might be termed a forecourt is very shallow and restricted. The tomb rises from a stone-built foundation which has the same shape as the ground plan of the Punds Water Cairn, except that it is less triangular due to the façade here being shorter relatively to the transverse diameter of the cairn.

The frontal façade (Pl. VI, 2) consists of loosely constructed walling faced in great part by large low slabs closely fitted where they join, and there is here no permanent portal opening. In its present condition the end stones of the façade have not the pillar-like character of those seen at Punds Water and the Hill of Dale (*v. infra*), but as there has been disturbance at both horns the stones which originally finished the façade may have been removed. It is even possible that the two outcrops of rock indicated in the plan (fig. 2) may have been accepted by the builders as completing the design. The concave front of the façade measures 38 feet along the masonry and about 36 feet along the chord of the slight arc.

The monument is not a cairn in the strict sense of the term, as the Punds Water structure is. The chamber and passage leading into it occupy the heart of a solid mass of masonry circular in outline, which rises 5 feet above the foundation, contracting as it ascends, as if it might, originally, have had a domical form. The top, however, is disturbed and the chamber is exposed. This has the trefoil form characteristic of this type of tomb in Shetland, and measures some 9 feet by 10 feet 6 inches at most. The inner wall-face, which survives to a height of nearly 5 feet, is formed of large stones, and the interior is occupied by heavy flags which probably formed the roof. The passage which runs through the thick wall of the tomb is 12 feet long and 2 feet wide, with a height of 2 feet from the present level of the floor. It had originally been roofed with lintels, and the three innermost of these are still in place. The outer end of the passage has been ruined, and the exact position of the entrance cannot be defined. Of this again later on.

The base of the circular building described above is set back some 2 feet from the edge of the foundation, behind it and at the sides, and the two are concentric. In front, however, the outer wall-face of the circular structure curves inwards to the line of the passage, to complete the circumference, while the border of the foundation platform, inclining

outwards on each side, is continued to meet the ends of the frontal façade at sharp angles, to form the conspicuous horns of the monument.

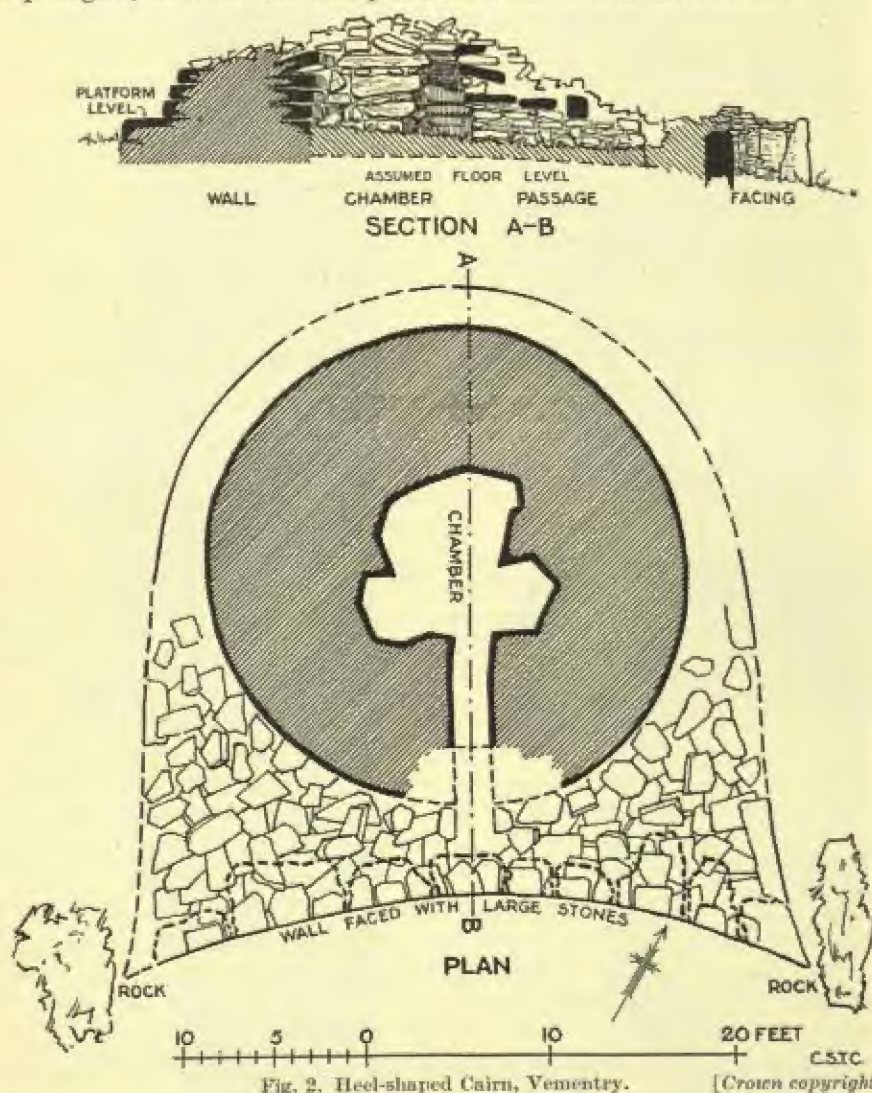


Fig. 2. Heel-shaped Cairn, Vementry.

[Crosen copyright.]

It follows from this disposition of parts that on the flanks of the circular solid mass of masonry, behind the horns and between it and the frontal façade, there is a space now occupied by loose stones. On the south-east they have no orderly arrangement, but it is to be noted that the stones here forming the surface of the foundation platform are almost all slabs. On the south-west side the appearances suggest that the material

between the façade and the circular wall-face had been laid in courses (Pl. VI, 2). The conclusion to be drawn would seem to be that the "cairn" was completed in front—although there is no evidence of bonding on the wall-face—by a building of stones less solidly put together, and that this has collapsed in course of time, leaving the frontal wall of the circular building exposed in front and on its flanks.

It has been stated above that the outer end of the lintelled passage is ruinous. Between this and the façade there is a quantity of loose material, and the arrangement of the stones in this mass indicates that the passage was originally continued to the central point of the façade. There is now no opening to the exterior in the frontal walling, but it does not follow that there was not one originally. It is quite possible that the tomb was closed after the last interment in it.

Cairn on Hill of Dale.—Overlooking Dale Voe from the west is a high ridge named the Hill of Dale. On the shoulder of this, some 700 feet

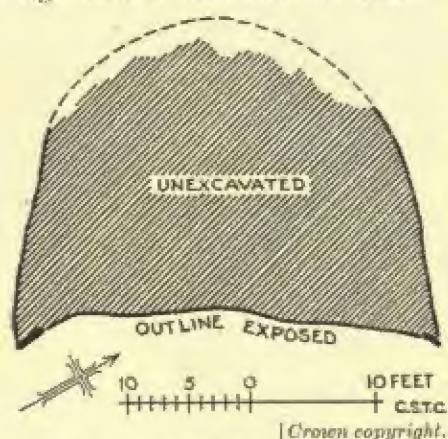


Fig. 3. Heel-shaped Cairn, Hill of Dale.

above sea-level, there is a cairn upon which some excavation was carried out in order to discover if it belonged to the heel-shaped category. When its margin was defined it was revealed that the cairn was surrounded by a low wall (Pl. VI, 3) except round its convex side (fig. 3), and that there had been a frontal façade with pillar stones at its extremities (Pl. VI, 3). The façade measured 33 feet 6 inches, and the upright stones stood 3 feet 6 inches and 2 feet 3 inches respectively above ground level. The distance from the façade to the convex border of the cairn was 23 feet

6 inches. This margin was defective, and the disturbance of the material extended into the heart of the cairn. As there was no admixture of earth among the stones of the cairn, the spade could not be used, but an attempt was made to discover if a chamber existed by removing the stones by hand down to ground level. This was first carried out along the morphological axis, but nothing to show the presence of a chamber or passage was revealed. The centre of the cairn had been much disturbed, and either the heart of the cairn had been torn out and the chamber destroyed by some former excavators or the cairn had never been chambered. Time did not permit of the removal and replacement of all the stones of the cairn *en masse*, nor was the labour available; so the examination had to be postponed and left inconclusive. That a closed cist or cists remained unexposed in the mass of stones is possible, and



1. Ventry: façade, from S.S.E.



2. Ventry: façade, from E.



3. Hill of Dale: S. corner and part of S.W. side.

[*Crown copyright.*]

this solution of the problem will be referred to later on. An object of steatite showing tooling was picked up from among the stones.

Fifteen structures, situated chiefly in Northmaven and in Walls and Sandsting, have been included in the Inventory of the Ancient Monuments Commission as examples of cairns of this special local type. All are much ruined and some are represented by mere fragments. Plans of a few of these are reproduced in figs. 4 and 5. It will be observed that the trefoil form

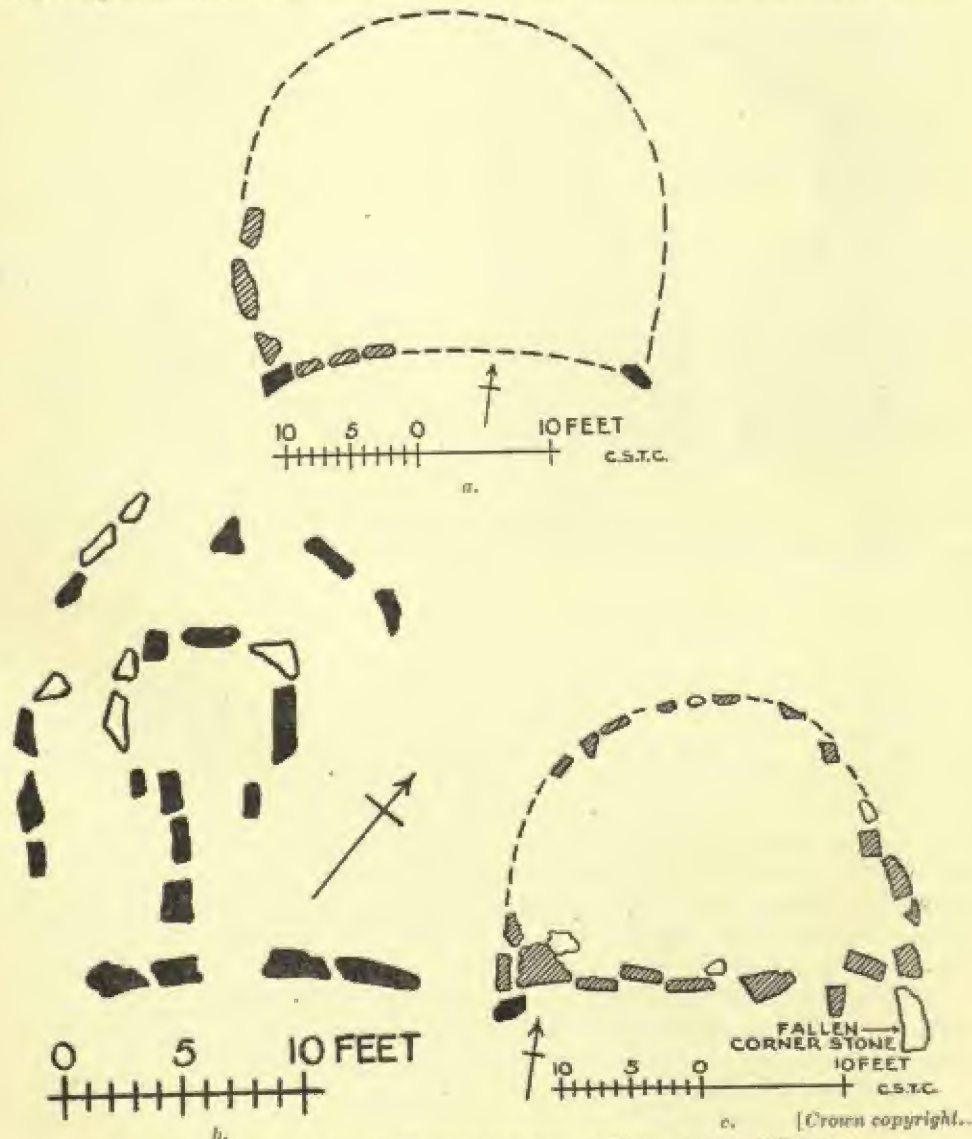


Fig. 4. Heel-shaped Cairns: a, Ward of Silwicks; b, Mangaster; c, Gillaburn.

of the chamber is not universal. At Viville Loch (fig. 5, *a*), while the angular character of the chamber is retained, the transeptal recesses are enlarged at the expense of the apical, and one of them is distorted. The chamber in a second cairn at Mangaster (fig. 4, *b*) has taken a rounded form, and the transeptal antechamber has been merged with the chamber proper.

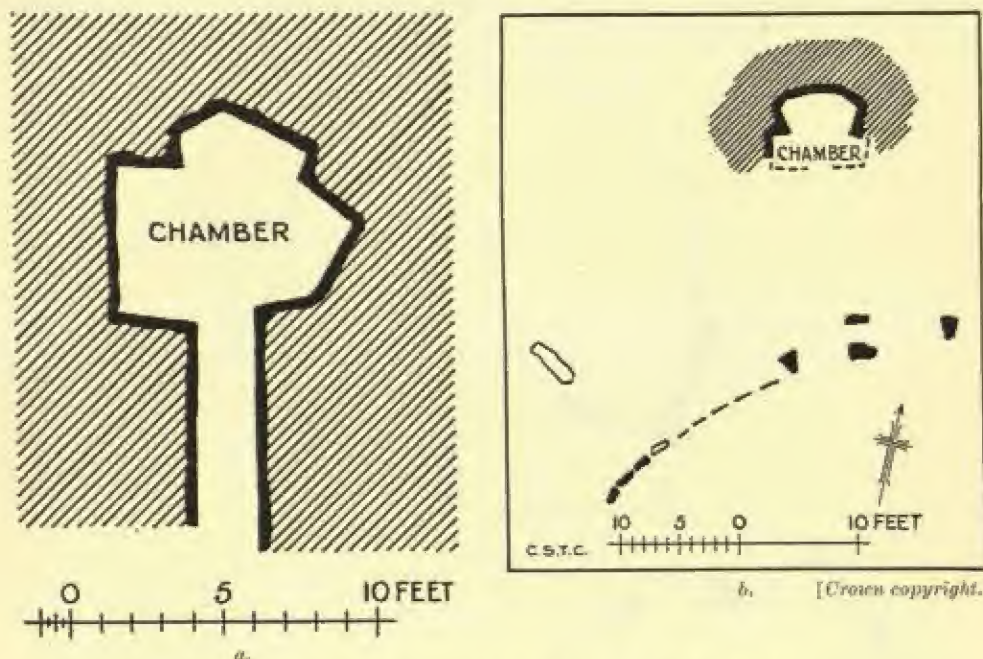


Fig. 5. Heel-shaped Cairns: *a*, Viville Loch; *b*, Turdale Water.

At some sites the remains are so ruinous and confused that identification of the monument is very difficult, and sometimes quite impossible without excavation, and this is also difficult, for generally it involves the lifting by hand of stones of large size. Such a structure is "The Benie Hoose" near Isbister, Whalsay, but a recent excavation in the disturbed upper layer of the site yielded the first piece of Neolithic pottery to come from Shetland. It was "a portion of an undecorated carinated dish of Unstan type"; other finds were so-called rude stone implements of Shetland type, a small flint scraper, fragments of steatite, and "a large clay vessel showing an incrustation of soot."

We must now leave the mainland of Shetland with its satellite isles and go to Unst, the most northerly island of the group, to consider some other complications respecting cairns of the type being described.

Looking over Balta Sound from the north is a long ridge which rises at its eastern end into two low hills named the Peerie and the Muckle

Heog respectively. The latter approaches a height of 500 feet above the sea; the Peerie Heog is some 100 feet lower. The rock is here serpentine, and the two Heogs are covered with irregular outcrops and scattered masses of the rock, all of the strong yellow colour which the serpentine here assumes in weathering, on account of the chromium in its composition. The jointing of the rock is such that it splits off in large angular blocks, many having an irregular cuboidal form. At three situations accumulations of these uncompromising boulders form conspicuous cairns. One of them, and the smallest, on the Peerie Heog, is quite indeterminate. The largest mass stands on the summit of the Muckle Heog and consists of a confused mass of rough angular and squarish yellow boulders spread over a large area. Examination shows traces of a wall on the south side marking the probable base of the cairn, but nothing positive can be made out by simple observation.

The cairn entered the archaeological record in 1863 when Mr George Roberts read, before the Anthropological Society of London, a paper giving an account of discoveries made at this site.¹ His information was received from Mr Edmondstone of Buness, and was to the effect that during an "excavation made for the planting of a fishing signal" a "Kistvaen of unusual size was displayed" which on being opened was found to contain "a large number of human bones & skulls." The chief point in his paper, however, was the record, again at second hand, of the finding of a second cist which yielded a skull, some bones of ox, and six "urns or rather vessels formed for domestic uses out of a soft chloritic schist." The urns were figured and described in the paper, while the skull was pictured and fully described by Mr C. Carter Blake. A year later the site was visited personally by Mr Ralph Tate, and his report to the Anthropological Society is published in its *Memoirs*.² He "set labourers to work in removing the enormous accumulation of stones . . . that encumbered the top of the hill." The account given of the results of the examination of the cairn is very difficult to follow; two semi-circular walls were stated to have been revealed on the east side 15 feet apart, but what part these had in the general layout does not appear. Scattered human bones and fragments of steatite urns were said to have been found inside the inner wall, where "the skeletons and urns which were the subjects of Mr Roberts's paper were obtained." He found no cist and no cist covers among the stones, and his description of the discoveries is so different from that of Mr Roberts that it is unnecessary to follow his confused account further. The present state of the cairn is even more hopeless than Mr Tate found it in 1863. Apart from the short stretch of walling seen, no structural arrangement is obvious,

¹ *Mem. Anthropol. Soc. London*, vol. i. (1863-64), pp. 296-298.

² *Ibid.*, vol. ii. (1865-66), pp. 340-342.

but a line of stones in the debris running across the cairn suggested the possibility, in light of what will be mentioned about the third cairn, of a frontal façade. The evidence, however, for this cairn being included in the heel-shaped category is slender and a final judgment could be arrived at only by a complete clearing of the site.

The third cairn (fig. 6) lies in a gully at the foot of the steep west face of Muckle Heog. It is better preserved than either of the others, but it is composed of the same rough irregular and refractory material, and a more complete study of the cairn is very desirable. The debris covers

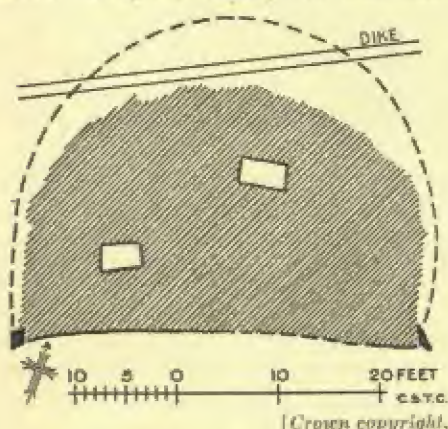


Fig. 6. Heel-shaped Cairn, Muckle Heog.

an area measuring 45 feet from north to south and 52 feet from east to west, and at places it is spread as much as 7 feet beyond its original outline. A series of stones can be traced continuously in the debris following a slightly curved line, with a span of 41 feet 6 inches between two upright stones, and this has been taken to represent the remains of a frontal façade such as occurs in the heel-shaped type of cairn. There is no sign of a portal or passage or chamber, but two cists, now empty, are exposed *in situ* and a third was apparently visible in 1863.¹ The cists

are formed of large flags set on edge in the usual way, and are somewhat larger and more massive than the ordinary "short cist" of the Bronze Age; the measurements of No. 1 are 4 feet 6 inches long, 2 feet 9 inches to 3 feet broad, and 2 feet 3 inches deep; of No. 2, 4 feet long, 2 feet 3 inches broad, and 2 feet 3 inches deep. This cairn affords the only evidence as yet forthcoming, unless the cairn on the Hill of Dale (*v. supra*) should prove to have been cisted and not chambered, that the type survived into the period when burial in closed short cists had become the prevailing practice. To sum up. The so-called heel-shaped cairn is characterised by (a) a long and slightly concave façade formed of walling, or walling faced with slabs, longer than the diameter of the cairn it faces, and also longer than its depth, and finished as a rule at its extremities by upright stones even when there is no other orthostatic feature in the cairn; and (b) a relatively small chamber approached by a passage and typically trefoil in shape—*i.e.* with two lateral recesses and a terminal one, which is the largest, and without any insertion of slabs to divide the passage, or the parts of the chamber, from one another. (c) There is some evidence that the chamber may be replaced by a closed cist or cists.

¹ *Mem. Anthropol. Soc. London*, vol. ii, p. 206.

As has already been stated, the cairns of the heel-shaped variety have not been met with outside the Shetland Islands. It is therefore of some interest to inquire as to the place to be assigned to them among the other varieties of chambered cairns.

In the first place, they must be included in the category of passage tombs—and are therefore to be linked with the northern group of Scottish chambered cairns—both on this account and because the frontal arch has the form of a continuous walling. A so-called short-horned cairn presents a certain resemblance to one of the heel-shaped variety, and the question arises whether the Shetland cairn can be considered as a degenerated form of this Caithness type. If the plan of the Vementry tomb (fig. 3) be compared with that of the Garrywhin cairn figured on p. 247 of Joseph Anderson's *Scotland in Pagan Times: Bronze and Stone Ages*, and reproduced here in fig. 7, it will be obvious that if the posterior horns were removed, and the frontal arch elongated and flattened, the outline of the Caithness cairn would become that of the Shetland tomb. Further, if the wall seen in the heart of the Garrywhin cairn were thickened until its outer face came to the surface, we would have the circular building seen at Vementry. Again, if the divisional slabs were removed from the chamber its plan would be quite like that of the trefoil chamber of the heel-shaped cairn. But these are all fundamental alterations—and there are some other distinguishing structural features that may point to a different conclusion—although evidences of degeneration are not to be denied.

As far as the chamber is concerned, degeneration may be recognised in the simple rounded form of the chamber at the ruined cairn at Mangaster

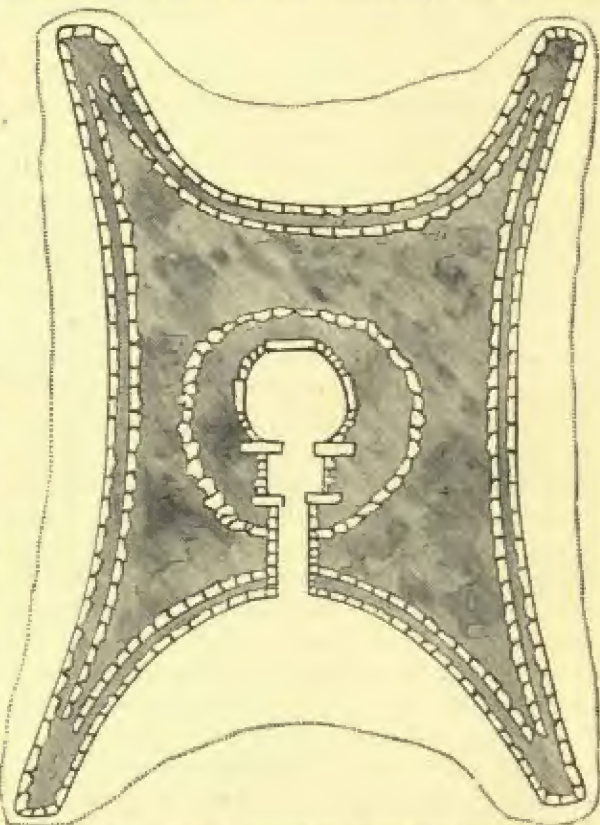


Fig. 7. Plan of Garrywhin Chambered Cairn.

(fig. 4, *b*). But in its complete form the absence of divisional slabs distinguishes the trefoil chamber from the tripartite gallery of the Caithness cairns and from the small bicameral chamber at Callernish. In ground plan it most closely resembles the cruciform chamber of some Irish passage tombs in Meath and Sligo. Again, its transeptal recesses distinguish it from the simple rounded chambers such as those of the Inverness cairns at Clava and Avielochan.

The most significant character of the Shetland cairn type, however, is the emphasis on the frontal arc. It is elongated and aggrandised, as it were, at the expense of the body of the cairn, and this feature must be analysed in some detail. The frontal arc is considerably greater than the transverse diameter, as already pointed out, but the span between the horns is also great compared to the length of the morphological axis. At Mangaster it is nearly twice as long as this dimension, so that the form of the cairn is that of an equilateral triangle with its apex rounded off.

It has long been recognised that the horned character of our long cairns is reminiscent of a similar feature of the plan of certain of the so-called Giants' Graves in Sardinia. Briefly described, the structural features of these Sardinian tombs are an elongated building containing a gallery, entered at the centre of a frontal façade by a portal; this may be only a hole cut in a tall central flagstone, or a doorway (fig. 8) bounded by the central pair of the orthostats forming the arc. The façade has widespread arms or horns marking off an area of ground as a forecourt. The span between the horns is considerably wider than the tomb building, and the frontal setting of erect stones is continued on each side into the outer wall of the structure enclosing the tomb chamber.

The frontal façade and the forecourt had in every probability some ritual significance, and the tradition of this seems to have survived in the construction of our northern long cairns.

The segmented chambered cairns of the south-west and west of Scotland and north of Ireland show, when the monument is entire, a façade of isolated stones set upright in a semicircle, the central pair of which form the jambs of a portal into the segmented gallery. The span of the horns is greater than the breadth of the chamber, but does not exceed the breadth of the covering cairn, of which the chamber occupies, normally, one extremity.

In the north of Scotland the segmented chambered cairns are replaced by the horned cairns. These show fundamental differences in chamber construction, but the forecourt and frontal-arc features are presumably repeated in the bay between the horns and the walling which bounds it. The façade is no longer orthostatic, but consists of a single or double wall, which is continued at the horns into an identical walling marking the base of the cairn (the peristalith).

Across the Pentland Firth, in the Orkney Islands, as has already been pointed out, horned cairns are few in number, and the so-called stalled cairns have neither frontal arc nor forecourt. It is interesting then to find that in Shetland the frontal arc assumes a prominent part in the design. At the Pundswater cairn the façade consists, like the frontal arcs in

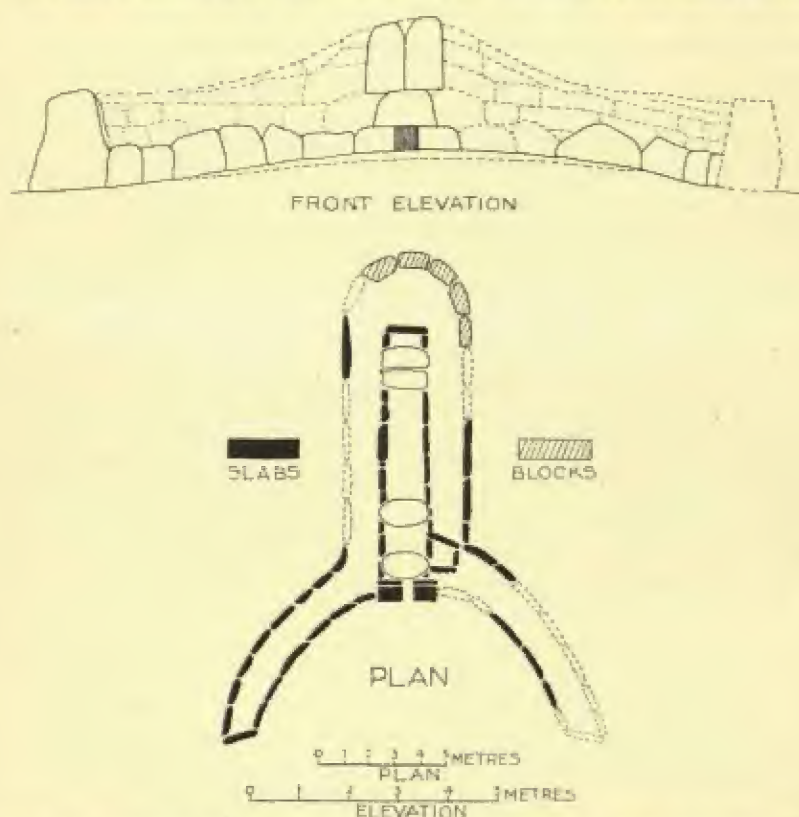


Fig. 8. Plan and elevation, Giant's Grave, at Sas Prigionas, Sardinia, after Dr Duncan Mackenzie.

Caithness, of a built wall. At Vementry the addition of a facing of slabs touching one another is a very unusual feature. The elongation and flattening of the arc in both cases is also peculiar, but the erection of upright stones at the horns where there is no other orthostatic feature in the monument is a unique arrangement. It is of special interest because it is a hint of the practice that was followed in the construction of the façade in Sardinia. Fig. 8, reproduced from a Memoir by Dr Duncan Mackenzie,¹ illustrates this feature as seen at a tomb at Sas Prigionas in Sardinia. The façade consists apparently of slabs set erect touching

Papers of the British School of Archaeology at Rome, vol. v. p. 109.

one another, and its horns are marked by stones more massive and taller than any others of the setting save the central portal pair. There the placing of more massive stones at the horns may have had some architectural purpose, and it is difficult to assign any other reason for the presence of the rather tall uprights at Pundswater and Dale. It is perhaps rash to push this comparison on such evidence as is available, but it is permissible to suggest that in this structural detail we have another link between our northern chambered cairns and Mediterranean tradition.

The general conclusion as to the status of the heel-shaped cairn is that it is not simply a degenerate Orkney or Caithness monument, but is a variety of chamber tomb developed independently in Shetland by people with traditions of their own, who perhaps reached the islands, not by way of the north of Scotland, but directly from south and west.

Before realising the possible significance of the contrast between the monuments of the chambered-cairn period in Orkney and Shetland, I was inclined to ascribe it to the lack in Shetland of the superb material for drystone building so abundant in Orkney. It is to that abundance, and to the relative ease with which stupendous flags could be quarried and wrought, that the triumph of the chamber builders, culminating in the incomparable tomb of Maeshowe, was due. To this also may be attributed the absence of signs of decadence referred to earlier. It contributed to a long persistence of the chamber-cairn culture in Orkney. The cult of the collective tombs seems to have resisted the encroachment of that of the Beaker folk in respect of burial custom. No instance has yet come to light in Orkney of a cist burial associated with a beaker.¹ Further, the presence of barbed arrow-heads in chambered tombs in the islands seems to point to their late date, or long persistence. The evidence indicates that the cult of the chambered cairns underwent continuous development, and reached its highest point in Orkney, and that it survived against intruding influences in these islands longer than elsewhere.

I am indebted to the Controller of H.M. Stationery Office for permission to reproduce the photographs on Pl. VI and figs. 1 to 6.

¹ One such has been recorded in Shetland, *Proc. Soc. Ant. Scot.*, vol. lxxvii. p. 34.

IV.

EXCAVATIONS ON THE ESTATE OF MEIKLEOUR, PERTSHIRE,
1939. By I. A. RICHMOND, M.A., F.S.A., F.S.A.Scot.

(1) A ROMAN SIGNAL-TOWER ON THE BLACK HILL.

The Black Hill lies at the east end of the parish of Caputh, on the north bank of the River Isla, about one mile above the watersmeet of Isla and Tay. It is the tallest of a small and isolated group of glacial hummocks, and rises 58 feet above the gravel-and-sand carse of the Stormont, which it commands. In shape it resembles a tadpole, with globular head tailing off in a sinuous curve. As has long been known, the head or summit of the hill is crowned by a small earthwork, not unlike a disk-barrow in appearance: and, on the assumption that appearance connoted reality, excavations were undertaken there by the Hon. John Abercromby in May 1903 (*Proc. Soc. Ant. Scot.*, vol. xxxviii. pp. 82-87). It was soon realised, however, that the work was not a barrow, but a small fortification, fairly regularly planned, crowning the hill. It had a V-shaped ditch and a rampart of "dark mould" (*op. cit.*, p. 83), and it was thought that the ditch did not appear on the steep northern side of the hill. The meagre relics consisted of iron nails, glass, and the end of a bronze pin, which "may be part of a *fibula*." The glass, it was said, closely resembled "similar glass at the Museum from Roman camps and sites, and is itself probably Roman" (*op. cit.*, p. 86).

In 1935 the site was visited by the writer and Mr James McIntyre, who were at that time examining putative Roman sites in Scotland. We were impressed by the similarity of the site to such works as Roy's signal-station north of Ardoch, and we felt that the relics recovered by Abercromby justified the hypothesis that the work was a Roman signal-station. When the position of the hill in relation to the known Roman fortress at Inchtuthil was taken into account, suspicion increased that, despite the heavy damage incurred during the excavations of 1903, fresh examination might yet reveal the characteristic features of a Roman signal-tower in timber or stone, enclosed by a rampart and ditch. The examination seemed the more desirable, since no trace could now be found of the relics recovered in 1903.

Permission to excavate was accordingly sought from Mr Mercer Nairn, owner of the site, and readily granted through his factor, Mr John Renton. But, owing to preoccupation with the site at Fendoch, advantage was not taken of the offer until 1939, when this Society made a grant to the writer for the purpose. Cross-sections of the defences soon revealed the V-shaped ditch

noted by Abercromby, and added considerably to his information. The ditch follows a not quite regular course, encircling the summit of the hill,

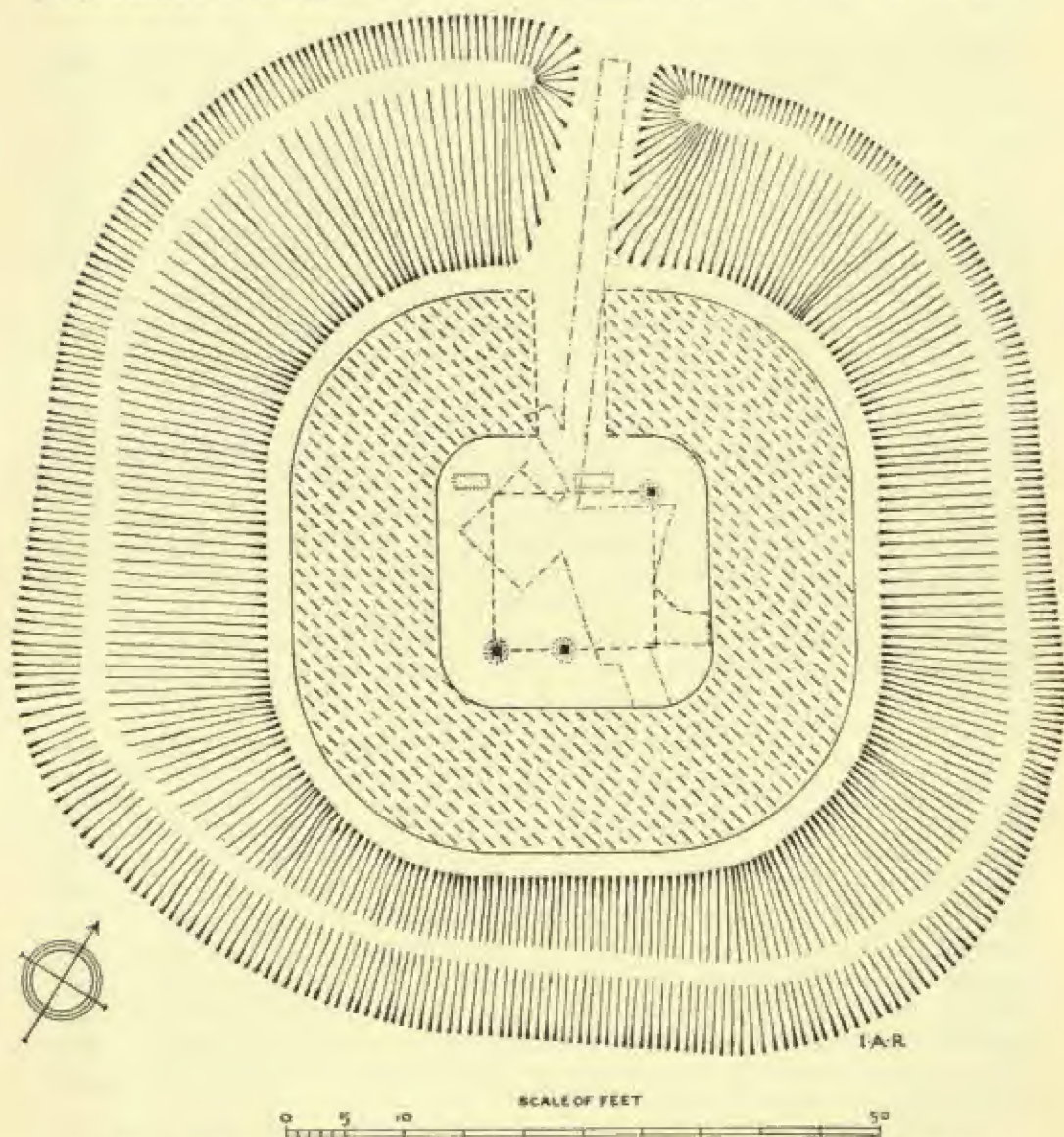


Fig. 1. Plan of Black Hill Signal-tower, Meikleour. Abercromby's trenches are defined by dots and dashes.

and does in fact run on its north side, but is interrupted by a narrow causeway of undisturbed subsoil at the point where Abercromby cut his



Ditch of Black Hill signal-tower, south-west side.



Post-holes for door and south-west angle of signal-tower,
Black Hill, Melkleour,

trench (fig. 1). The profile is V-shaped, but there is the narrow square channel at the bottom, as is typical of the Roman *fossa fastigata*. The depth at the outer scarp is only about 2 feet 6 inches, but this apparent weakness is due to the steep slope of the hill and is compensated by an inner scarp of 7 feet 9 inches, formed by cutting down the slope. The effective width is some 15 feet, and the upcast has been disposed in a shallow spread mound (not noted on fig. 1) beyond the outer scarp.

The rampart, which is separated from the ditch by a distinct if narrow berm, is not formed of upcast from the ditch, which would be yellow sand or gravel, but of dark-coloured material, sufficiently distinctive to have probably given the hill its name. It was built in evident layers or blocks. But the material of which it is formed is so sandy that rain-water has percolated through and through it. Thus, although the laminated structure was clearly visible to the eye, percolation, or leaching, had in this very exposed position washed out the normal traces of humus, denoting blocks of turf, leaving, as Dr Arthur Raistrick reports, only a dark pellicle, coating each grain of sand, to tell us that humus was once present. The effect of this staining, however, combined with the recognition of structure in blocks, is to dissociate the rampart completely from the subsoil and to place it in the well-known class of Roman ramparts composed of blocks of turf or humus. It was 12 feet wide at the base, and still stands 3 feet 8 inches high. It enclosed a space about 19 feet square, with rounded corners. The entrance had been on the north. Although trees prevented an examination of the actual passage, its existence was shown by an interruption of the ditch, in the centre of the north side, forming a natural causeway some 7 feet wide to which allusion has already been made.

Within the area thus defended, Abercromby had dug (*op. cit.*, fig. 1, p. 85) at least two large and deep pits, penetrating for 4 or 5 feet into the subsoil. Our first task was to rediscover and to isolate these, in order to learn how much of the internal space remained unexcavated. It was soon evident that the pits lay in opposite corners of the area. Elsewhere, therefore, the old surface was skinned by wide trenches, which presently disclosed three large round post-holes, each about 18 inches wide; two of these are diagonally opposite, at the north-east and south-west corners, while the third (Plate VIII) lies some 4 feet from the south-west corner. They thus form part of a building 14 feet square, which is the internal dimension of the standard turret on Hadrian's Wall. Further, they retained the impress of timbers 1 foot square. There can be no doubt that uprights of this scale, exactly comparable with the gate-tower timbers of Fendoch, held a high tower. The two adjacent posts may be taken to have held the door-frame. And in this connexion a small point observed by Abercromby may be regarded as significant. He records (*op. cit.*, p. 84) that

"a narrow trench, afterwards enlarged, was made westwards just south of the tree," that is, across the site of the inner hole; and here was found "a squarish freestone," exhibiting "on one face a countersunk hole, $1\frac{1}{2}$ inch in diameter and $\frac{1}{2}$ inch deep." There can be little doubt that this object, hitherto unexplained because its association with the post-holes remained unknown, had been the pivot-hole of the door.

Excavation did not produce further relics, except one more iron nail, of hand-made square section. But it is nevertheless possible to say that the excavation not only amply confirms the Roman date suggested by the previous relics, but definitely connects the work with a Roman structural type. This is the wooden tower, enclosed by rampart and ditch, of the kind so well known in Roman Scotland already. It may be remarked, however, that, while the type of tower is more or less constant, the enclosures vary. The well-known Gask series, with the exception of No. 5, exhibits no rampart. The Ardoch series, exemplified by Kaims Castle¹ and Roy's signal-post,² closely resembles the present example. None, however, is closely dated within the Roman period, nor has fortune enabled us to offer a close date for this one. An answer as to date must await the discovery of others in the same series.

The concluding remark raises the question of purpose. The tower is placed in a curious position. It does not, as might be expected, face Inchtuthil, $2\frac{1}{2}$ miles away. Its immediate objective is two isolated gaps or passages in a large linear earthwork, which runs across the plain some 500 yards away at the nearest point. The earthwork is known as the Cleaven Dyke, and its highly distinctive characteristics are described below.

(2) THE CLEAVEN DYKE, A ROMAN *LIMES*.

While the earlier Scottish archaeologists frequently refer³ to the Cleaven Dyke, there are few accurate descriptions of its features and course. The visible remains, known since 1772, consist of a large mound now approximately 30 feet wide at the base and 5 feet high, set equidistantly between two shallow flat-bottomed ditches, 16 feet wide and 2 feet deep, which lie 150 feet apart from centre to centre. The mound

¹ Kaims Castle, *Proc. Soc. Ant. Scot.*, vol. xxxv. p. 19, fig. 2.

² Roy, *Military Antiquities*, pls. x, xxxi; see also Richmond and McIntyre, *Arch. Journal*, vol. xciii. p. 313, fig. 3, for a more recent interpretation of the site.

³ Pennant, *Tour of Scotland* (1772), Appendix XV, p. 452. The "mount exploratory" probably refers to the large motte at Cargill. But in *O.S.A.* (1793), vol. ix. p. 506, s.v. Caputh, where the Dyke is described, the Rev. W. Innes makes an explicit reference to the Black Hill as follows: "In this area there are several exploratory mounts; one, apparently artificial (now called the Blackhill, and planted with firs), stands near the head of the supposed bridge, and from the remains of a fortification on the top, seems to have been designed to cover the landing-place." The *N.S.A.* has nothing whatever to say of the work. James Knox, in his *Topography of the Basin of the Tay* (1831), p. 64, notes that "the Cleaven Dyke has openings at the west end and middle, where the gates were probably situated." But Knox does not specifically refer to the gaps.



Fig. 2. Section of Cleaven Dyke, west of the Bladgowrie Road, Meikloour.

EXCAVATIONS AT MEIKLEOUR. 41

is thus separated from either ditch by a berm approximately 50 feet wide. It is also evident that in cross-section the mound has a volume considerably greater than that of the ditches combined (fig. 2).

An explanation of the last point may be developed from the evidence of three sections, cut through the earthwork in 1901. These revealed that the mound was composed of sand and gravel, such as the ditches must have produced: but this material had been retained at the edges "with a kind of clayey sand . . . for a distance probably of 2 yards, the object of this being evidently to prevent the gravel and sand from slipping" (*Proc. Soc. Ant. Scot.*, vol. xxxvi. p. 234). These conditions were observed again in three sections cut across the work in 1939. The character of the "kind of clayey sand" was much as described by Dr Thomas Ross. But it felt to the touch like material principally composed of humus; and analysis revealed that it was precisely the same as the turf or humus from the Black Hill earthwork, already described above. Further, there were definite traces of a cap of the same material: while at one point it could be seen that the kerb had been built and the mound retained in steps. It is thus clear that we are dealing with a mound composed not merely of upheast from the ditches, but of humic material disposed in a cap and revetments. One source at least of the extra material in the cross-section is therefore plain.

A second source whence extra material may have been derived is the large 50-foot berms. It is noteworthy that these exhibit, when compared with the surrounding land-surface, a markedly flat appearance, as if they had been deliberately stripped or levelled. Apart from the revetment and capping in humic material, these wide berms are in many ways the most remarkable feature of the earthwork.

The existing sector of the Dyke runs through the Meikleour plantations known¹ as the North and South Woods, for a distance of 2070 yards. It crosses somewhat obliquely the main road from Perth to Blairgowrie, at 150 yards south of the twelfth milestone from Perth, leaving 1530 yards of the earthwork to west of the road. The earliest mention of the work in archæological literature² is in 1772, and there is reason to think that by then the state of the remains was not very different from what it is at present, seeing that upon Stobie's *Map of Perthshire*, published in 1811, the work is shown amid plantations covering the same area as to-day.

The course followed by the Dyke is usually taken to be "perfectly straight" (*Proc. Soc. Ant. Scot.*, vol. xxxvi. p. 235). Though correct as applied to the general course, this description is not strictly true in detail. At 120 yards west of the Perth-Blairgowrie road, the mound and ditches, hitherto running 61 degrees west of north, turn 10 degrees southwards. This direction is maintained for 183 yards, when there is a northward turn of 21 degrees, and at 130 yards farther east the works resume their old line. The reason for the change in direction appears to be a desire to approach at right angles a passage through the work immediately west of the Perth-Blairgowrie road, where the south ditch is interrupted by a 38-foot gap. The main road has swept away the east side of the corresponding gaps in the mound and the north ditch, leaving to view only their western butt-ends. Modern gravel-pits also impinge upon the causeway, helping to obscure the feature and to explain why it has hitherto remained unobserved. The centre of the gap is 140 yards east of the 10-degree change of direction already noted. Less obscure, however, is a second gap in the work, situated 220 yards east of the turn where the main course is resumed. This is 60 feet wide. No excavation was carried out in the eastern gap, but an examination of the west gap showed that no laid road had passed through it. The humus kerbing of the mound, however, clearly defined its butt-end and is here not less than 6 feet wide at the base.

Beyond the wood towards the west no trace of the work is now to be seen in the ploughed field (No. 994), though an air-photograph shows the ditches just before they reach the little runner at the north end of the field. They are still continuing the same straight line. Eastwards, the mound can be seen making its way across field 1035, and it is again visible as a gentle swelling at the north end of field 1066, just south of the twelfth milestone on the road from Dunkeld to Coupar-Angus. No further remains can be detected, but these observations increase the known length of the work to 2970 yards. There is, however, no reason why the work should not have run straight to the River Isla, as tradition asserts that it did.

¹ Ordnance Survey Map, 25-inch scale, *Perthshire*, lxiii. 11 and 15; 6-inch scale, lxiii. S.E.

² See note 3, p. 40.

At this point the nature of the work requires further discussion. So far as the evidence of sections and field-observation goes it is of uniform construction throughout. It consists of upcast from two shallow flat-bottomed ditches, enclosed between revetments and a cap of humic material. This turf or humus is distinguishable by colour, but has been so heavily permeated or leached by water as almost to have destroyed the evidence from microscopic analysis. The bank thus formed is the most prominent feature of the work, and its prominence has been increased by separating the ditches from it by levelled berms not less than 50 feet wide. The whole work thus forms a broad strip of cleared ground, 150 feet wide over the ditch centres. Its limits are marked by the ditches and its axis by a bulky mound.

The work thus described is evidently not defensive. Its ditches are insignificant, giving advantage to neither side and serving only to demarcate the strip which they bound. Again, the large low mound, on the middle line of the work, is not a high rampart from which the top has been removed, for the cap and revetments show that its shape and size have changed relatively little since it was first erected. Thus, the work as a whole is evidently a boundary-belt, so broad that it could not be mistaken for anything else, and furnished with a central mound so that the actual boundary line might be clear to all beyond dispute. The work may be valueless as a defence: its political significance is strikingly clear.

The great breadth of the work is perhaps its most remarkable feature. Its level 50-foot berms, bounded by the shallow ditches, hint at the reason. To-day, the woods through which the work passes have been planted on top of it by man; thus, it existed long before the plantations. But the flat sand-and-gravel carse which it traverses is by nature tree-bearing, and it is reasonable to suppose that when the boundary was first cut it was laid out through woodland. This would explain not only the width of the work—a ride in a wood must be wide to make an impression—but also the fact that the humic material, of which the revetments and cap of the mound were composed, is so lacking in form and solidity. Woodland soil can be cut in blocks and built as a kerb or a cap, but it is friable, porous, and ultimately unretentive of its binding content, exactly like the material which confronts us in the mound. Indeed, it is difficult to conceive what other condition would more readily explain the state of affairs revealed by the microscope.

Analogies for the work are at first sight hard to find. It is quite unlike British boundary dykes of the Dark Age or the Bronze Age, which exhibit neither the wide gaps for passage nor the broad levelled berms nor at all commonly the double ditch. On this important question of comparison a consultation, verbal and epistolary,¹ with Sir Cyril Fox,

¹ Sir Cyril Fox writes: "But no true parallel to your dyke is known to me. The broad openings; the broad and levelled berms: these do not occur in my experience in Dark Age earthworks. The

whose knowledge of such works in these islands is unrivalled, confirmed the verdict unequivocally. The difference has, indeed, been observed in print by Mr O. G. S. Crawford, whose wide experience of linear earthworks entitles his views to respect: in describing a native defensive frontier-dyke near Melrose, he observes that at "no point in its course has the earthwork the slightest resemblance to Roman workmanship, and this explanation can be entirely eliminated. Except for a portion north of Cauldshiels hill the dyke nowhere follows a really straight course, but winds irregularly across the moor. In this respect it differs entirely from the Cleaven dyke, near Meikleour, in Perthshire, which runs straight as a Roman road across the country between the Isla river and some undetermined point farther west" (*Antiquity*, vol. x. pp. 348-9). It is evident that, when they are confronted by the Cleaven Dyke, both authorities turn away from the native dykes, with which they are so well acquainted, with a lack of hesitation which inevitably prompts the question whether the work may not be Roman.

Roman frontier-dykes, however, as opposed to frontier walls or palisades, are not so common as to suggest that many examples will be forthcoming for comparison. Yet there is one famous linear earthwork in Britain which offers in general design and purpose some striking points of resemblance to the Cleaven Dyke. This is the dyke commonly known as the Vallum, which formed the rearward boundary-dyke of the military zone of Hadrian's Wall. True, the similarity is not immediately apparent: for the works are conversely planned, the Cleaven Dyke with central mound and lateral ditches, the Vallum with lateral mounds and central ditch. Granted this variation in design, however, both works perform the same function. They cut off, by means of their outer mounds or ditches, a broad linear strip of land and mark it as an indisputable boundary by an axial feature, namely, a deep ditch or a broad upstanding mound. The minds which conceived the two works were thus approaching the same problem from the same point of view, if in slightly different manner. Nor is the main design of the works, attested as Roman for the Vallum, the only feature of Roman guise which the two dykes have in common. Both run for a long distance with undeviating course: both exhibit angular changes of direction while running straight from point to point; the mounds of both are retained by humic revetments so that their profiles are sharp and clear to this day; in both, too, a flat-bottomed ditch of non-military type is employed. Nor do these numerous points of resemblance lose significance when it is recalled that parallels for either are not forthcoming elsewhere. Two dykes so distinctive in themselves, yet so closely

boundary banks of the Late Bronze Age offer no parallel either. So, assuming that the character of the work as described in your letter is constant, I think you are right in hinting at Roman origin, and political not military function."

alike in conception and purpose, can hardly have belonged to different ages. The Vallum is indisputably Roman. If we introduce at this point the fact that the Roman watch-tower on the Black Hill surveys the passages through the Cleaven Dyke, the chain of inferential reasoning in favour of a Roman origin for this work also seems to be complete.

The argument for a Roman date will be further reinforced by a consideration of the purpose of the work in relation to its topography. Earlier Scottish archaeologists took the Roman date for granted, some fancying the Dyke to be the very *vallum* of Agricola's famous battlefield, where *legiones pro vallo steterē*; others supposing that it bounded, together with Tay and Isla, one vast Roman depot. No criticism of these views is here warranted, for no student of Roman tactics or castrametation would explain the Dyke in such terms to-day. Nevertheless, the old topographers were right in seizing upon the situation of the work as the key to its function (fig. 3).

At the east end the Dyke ran to the River Isla. There is no reason to suppose that it ran beyond it. Tradition does not say that it did, and the parish boundary which so temptingly continues the course seems¹ to be a relatively modern adjustment. It is the Isla, deep and sluggish, which then forms a natural moat protecting for eight miles the Roman line of advance along Strathmore. This was based (fig. 3) upon a military road which crossed the Tay above the watersmeet of Tay and Almond and extended beyond the permanent fort, recently rediscovered from the air at Cardean, near Meikle. In its early phase at least, however, this blockade of the Highlands pivoted upon the legionary fortress of Inchtuthil, which looked not only north-eastwards to Strathmore but north-westwards to the gates of Atholl. On strategic grounds it seems almost axiomatic that so long as Roman troops were controlling Strathmore at all, the crucial position of Inchtuthil must have been firmly held. And in fact the notable series of works, which, as Sir George Macdonald has shown, succeeded the legionary fortress on the site, attests the tenacity with which Roman generalship clung to this key-point. Inchtuthil, however, is not sheltered by the Tay. It lies on its farther bank, forming as it were a huge redoubt or bridge-head fortress, whence troops could readily operate against the hill-folk. Immediately in front of it stretches the flat wooded carse. Then follows the broken ground of the Stormont, a jungle of lake and marsh, indifferently drained by the Lunan Burn. Beyond the jungle rise the foot-hills of the Grampians. An obvious need here existed for an artificial barrier, blazing through the forest the limits of Caesar's land: for such an operation *limitem scindere* was the Roman term.²

¹ This fact emerges from Stobie's *Map of Perthshire*, where the older parish boundary is shown. Two days spent in local inquiries from the ecclesiastical authorities revealed only ignorance of the matter.

² Tacitus, *Annals*, I. 50, *silvam Cassiam limitemque a Tiberio captum scindit*.

Exactly this need is met by the Cleaven Dyke. The work is said to have ended at the Tay: and it does in fact disappear from view not far from an old river-bed where the Tay once ran at a stage in its geological development far earlier than Roman times. Actually, the Dyke is so

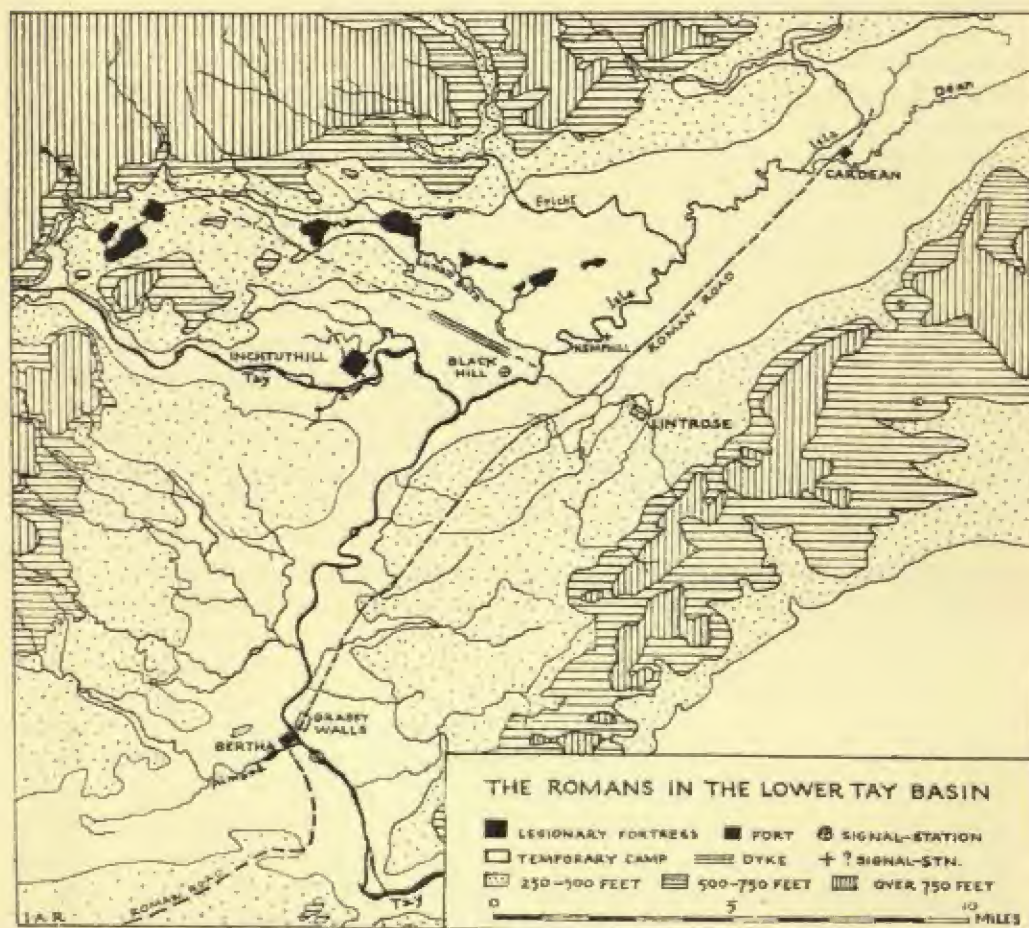


Fig. 3. Roman remains in the Tay basin in relation to the Cleaven Dyke.

planned as to skirt this old river-bed, and to head for the north-west, whither the well-known roadway from Inchtuthil also points. In fact, there is no reason to suppose that the work ended where it is now last seen, with the effect of exposing the whole front of Inchtuthil, 2 miles distant across the haughs. On the contrary, it might be expected to continue right across the rolling country until it reached the hills near Dunkeld, 6 miles to the north-west. It is not as if Roman activities were unknown

in this region. The road heading in this direction from Inchtuthil has already been mentioned. It will also be recalled that the Gourdie quarries, whence stone was obtained for the rampart of the fortress and for the bath-house, lay 2 miles to the north, within the tract of land which would be included by a continuation of the dyke. Thus, it is a reasonable hypothesis that the Dyke continued across the plain, so as to define the Roman territory on the left bank of the Tay and to cut off the broken wooded lands imperfectly drained by the Lunan Burn and its numerous lochs.

If this conception of the Cleaven Dyke is correct, it will now be worth while to return to the question of the relation between it and the Black Hill signal-tower. In the general scheme the position of the tower is significant, for it commands the head of the re-entrant formed by the Isla flood-plain. That, however, was not the only consideration in the minds of its constructors. The tower is so placed as immediately to survey two passages through the Dyke. Such gaps, comparable in breadth with those¹ of the German *limes*, seem to have been rare, for no more occur over a length of 1466 yards beyond the western example. Yet these two are relatively close to one another. They are best explained as openings serving two forest-trails. One of these occupies the important natural line of communication between the river-fords of Kinclaven and the Highland pass of Glenshee, carrying the only road between Perthshire and Braemar. The second serves a route of more local significance and leads to the lowest crossing of the Lunan Burn at Littleour. The crossings are not occupied by a paved track: in other words, they were not Roman lines of communication but local native routes, which here converge upon the river-crossing and for which paving was not required on the gravel subsoil. On the other hand, it seems necessary to assume that they were passing through woodland until they emerged at the cleared *limes*, since they could otherwise have been made to converge upon one opening only. This topographical point² usefully confirms the deduction in favour of woodland³ to be made from the nature of the subsoil.

Granted, then, that the trails and the *limes* which the tower watched ran through woodland, the reason for preferring the Black Hill above all other possible sites becomes apparent. In wooded country a vantage-point which placed the ground-floor of a watch-tower 60 feet above its

¹ Cf. Altes Jagdhaus, Fabricius, *O.R.I.*, Strecke 3, Cap. 8, and *passim*.

² One might compare Fox, *Personality of Britain* (1938), p. 51, for a not dissimilar argument from the distribution of chambered cairns to that of forest-lands.

³ For a speculative estimate of the nature of the woodland the writer is indebted to Dr J. B. Simpson of the Geological Survey, who suggests "one would have thought that pine was the most probable dominant, with a sprinkling of oak, elm, birch, alder and willow, and a scrub vegetation of hazel, blackthorn, and broom." It may be remarked that while pine is no longer there indigenous, it has recently been found in pollen from Roman deposits as far south as Benwell and Cockmount on the line of Hadrian's Wall, as yet unpublished.

whole field of survey was an immense advantage. Add to the height thus gained not less than 30 feet for the tower itself, and a point has been gained from which every movement far and wide across the *limes* could be detected and signalled. Indeed, Nature has here provided an eyrie comparable with a Norman motte.

What then were the connexions of this remarkable tower, so conspicuously placed at the key-position in the re-entrant *limes*, where the man-made boundary takes the place of the river, Nature's moat? It would be easy enough to signal to Inchtuthil, $2\frac{3}{4}$ miles away, which was probably the seat of the nearest garrison. This may well have been the principal function of the tower. But watch-towers on Roman frontiers run more commonly in series than in single units; and it might be expected that the left bank of the Isla was surveyed from other posts in touch with the Black Hill. It is perhaps worth while to direct attention to the site of Kemphill, a summit overlooking the river north-west of Coupar-Angus, where the name itself is suggestive of an earthwork and where, on the very crown of the hill, there is a suspiciously flat platform, suggestive of an earthwork much reduced by ploughing. The place is in view of Black Hill, and the use of the spot by the Ordnance Survey as a minor triangulation-point is eloquent of its local command of view. Here, it might be suggested, lay the next signal-post on the way to Cardean.

V.

THE RAMPARTS OF TRAPRAIN LAW: EXCAVATIONS IN 1939. By STEWART H. CRUDEN, F.S.A.Scot.

Traprain Law, East Lothian, was scheduled in 1923 under the Ancient Monuments Acts, 1913-31. Shortly after this event, the First Commissioner of His Majesty's Works agreed to entertain certain limitations of the powers acquired under the Act whereby a section of the hill, lying to the north-east, was leased by the owner to the County Council for quarrying purposes. Provision was made for the investigation and recording of archaeological features, and all important relics recovered were to be presented to the National Museum of Antiquities.

The boundary of the quarry was extended by the County Council with the consent of the owner, Lord Traprain, in 1938, involving an area containing within its southern limit part of the ramparts of the Iron Age oppidum, viz. the innermost on the north-east shoulder of the hill. The Commissioners then reiterated the earlier conditions and the County Council lent the necessary labour for excavations. The Office of Works entrusted me with the archaeological supervision under the direction of Mr J. S.

Richardson, H.M. Inspector of Ancient Monuments, acting in consultation with a Committee of the Council of the Society of Antiquaries of Scotland.

The history and geography of Traprain have been fully described by Dr Curle in these *Proceedings*. It suffices therefore to recall here that the hill is in shape a pointed oval lying east and west longitudinally, 360 feet high from base to summit, which is 710 feet above sea-level. It is the north side and the east and west ends that are protected by ramparts; the south side is sheer cliff and requires no fortification.

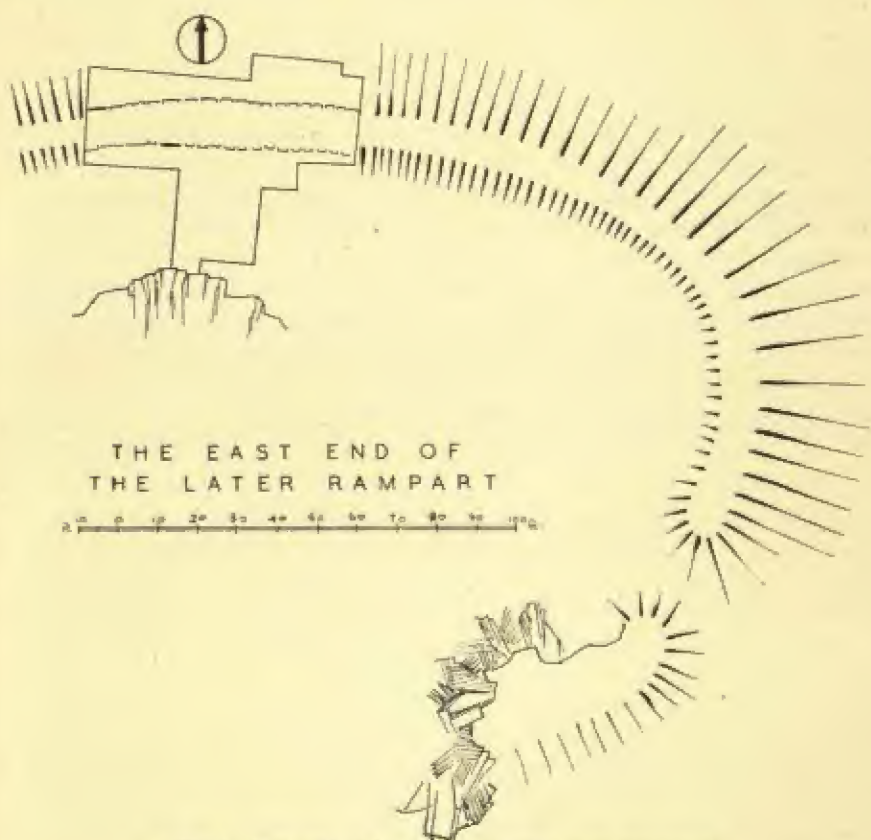
There are at least two defensive systems on Traprain Law, both simple in conception and presenting to-day a generally unimposing appearance. Surface examination shows the two defences to be characterised by ramparts of different profiles, suggesting that they had been constructed upon different architectural principles and represented two distinct periods of building activity.

The slope of the hill is very steep all round and the two ramparts belonging to the older system are a considerable distance apart, the upper member (rampart 2) being 100 feet higher than the lower (rampart 1); both emerge from the quarry at the east end of the hill, where 100 yards of their eastern ends have been blasted away. The upper runs along the face in an irregular zigzag manner, due, perhaps, to the desire of the builders to utilise rock outcrops or to provide sally-points, bastions and fields of fire for the sling. But, about half-way along the north side, it swings uphill. At this change of direction it is crossed by the later defensive system of one rampart (3), which has been running parallel to it and 10 feet behind it. This later rampart does not zigzag as much as 2. After crossing 2 it continues westwards for 50 yards, then turns through a right angle, diving downhill until it meets and merges with the lower member of the earlier system. Thereafter it resumes its westward course, swings round the west end, where it is interrupted by two pairs of entrances, and eventually runs into the cliff face on the south side.

Rampart 2 does not reappear on the surface inside 3, and there is no evidence in the nature of heaped turf to suggest that it ever did—or, in fact, that it was ever anything else but a branch of 3. However, excavation at the point of intersection proved a distinction. This will be fully described in due course. Where 1 went to at the western end cannot be determined without further excavation. It may, like its fellow, (2), have swung uphill and suffered complete demolition, or it may have originally occupied the path now followed by 3. In two places rampart 2 bifurcates, once to form a loop, and once to form a branch rampart, 2A, which runs downhill as a trackway to rampart 1.

The main excavation was on the eastern shoulder of the hill. The shoulder is a flat terrace at the present highest point of the quarry face.

It is 50 feet wide at its widest, and extends from the rampart 3, which runs across the brow of the quarry face to the rock which rises steeply to the summit of the hill. The rampart peters out into this rock at the east end of the hill. A few yards from its termination it is interrupted by an entrance connected with a trackway from the bottom of the hill (fig. 1).



• Fig. 1. East end of Rampart 3 showing area excavated.

This stretch of rampart across the quarry top was standing about 6 feet high from foot to crest, and we excavated a length of 60 feet, and extended the excavation inwards across the terrace to the rock, uncovering an area of 750 square feet (22 by 34 feet) (fig. 2, and Pl. IX, 1).

The rampart (figs. 3 and 4) is constructed of a core of turfs laid in layers, and faced on either side with a dry-built wall of flat slabs of local whinstone laid in courses. The overall width is 12 feet and the average height of the facing walls is 3 feet. Estimating by the number of courses that had appar-

ently slipped forward, the original height would be about 6 feet. The disintegration of the turf core and the subsidence caused thereby have resulted in the facing stones tilting inwards. This inward inclination of the facing

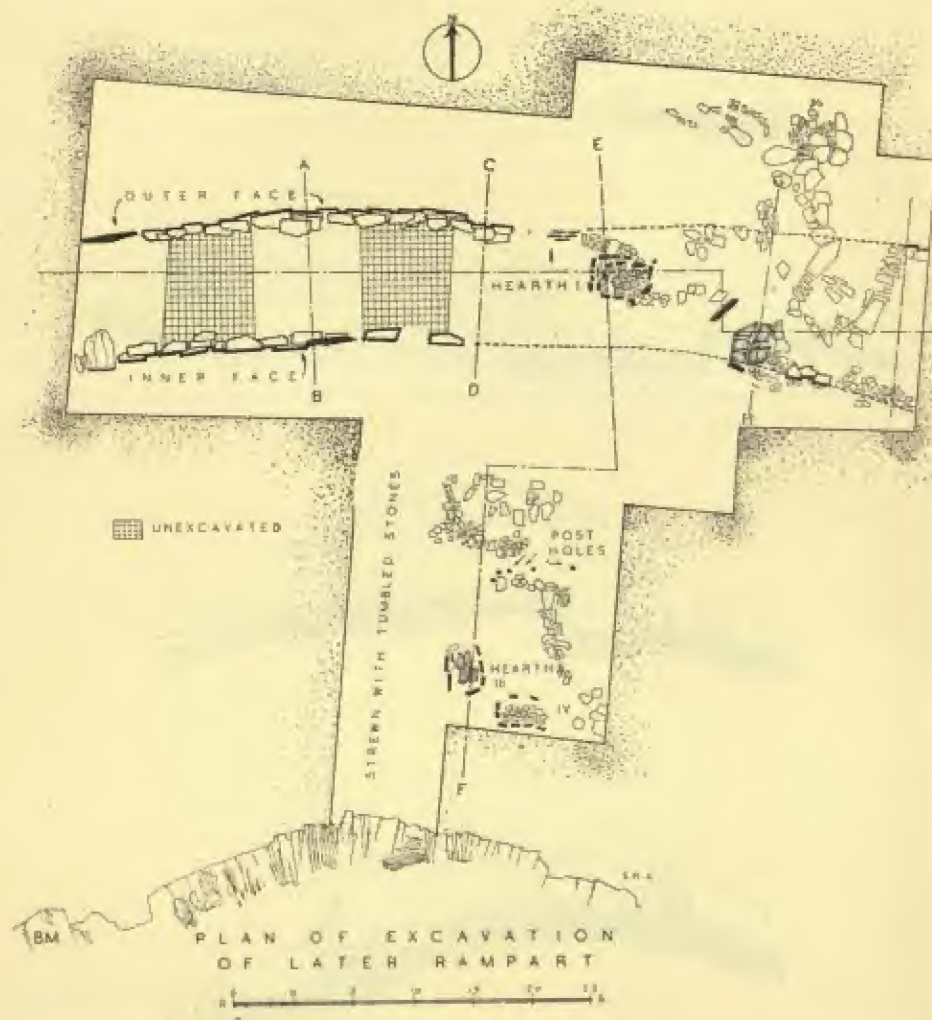


Fig. 2. Excavated area.

stones, sometimes to an acute degree, according to the severity of the subsidence, is the characteristic feature of the rampart ruins. In some places the originally horizontal stones are standing vertical. Occasionally slab-stones are placed vertically, but not in such a way or to such an extent as to deserve classification as a regular feature of the construction. There

were two such stones within the length excavated—one a substitute for the horizontal courses, the other lying against them and serving no functional

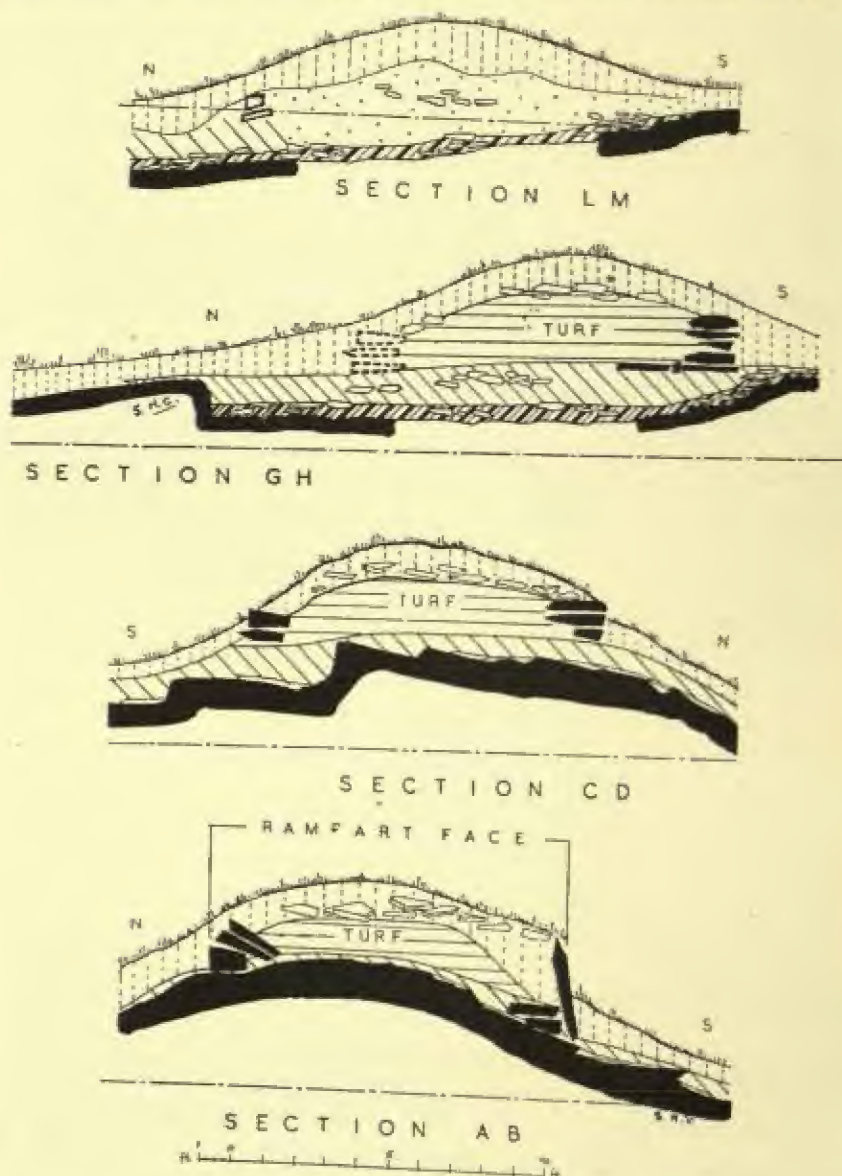


Fig. 3. Sections through Rampart.

purpose. The rock slopes downhill from the outside face and there is no ditch (Pl. X, 1).

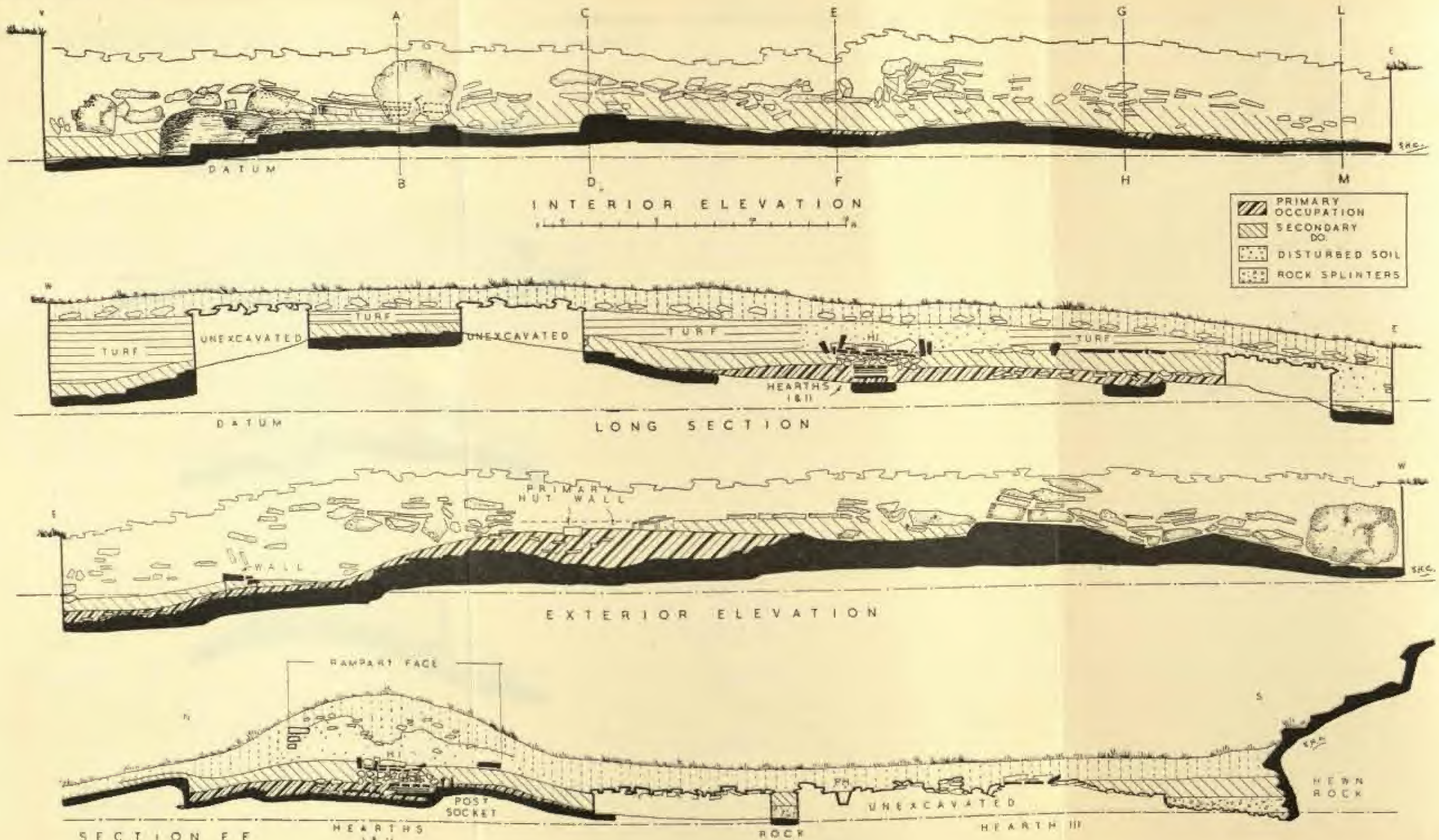


Fig. 4. Elevations of and sections through Rampart.

In two places the turf stratification disappeared for a length of 10 feet, and the rampart core was made up of disturbed soil, similar in appearance and texture to the top soil, save that it dried a lighter powdery colour (long section, fig. 4). Each of these breaks in the core coincided with external evidence of disturbance—the outside and inside faces were either

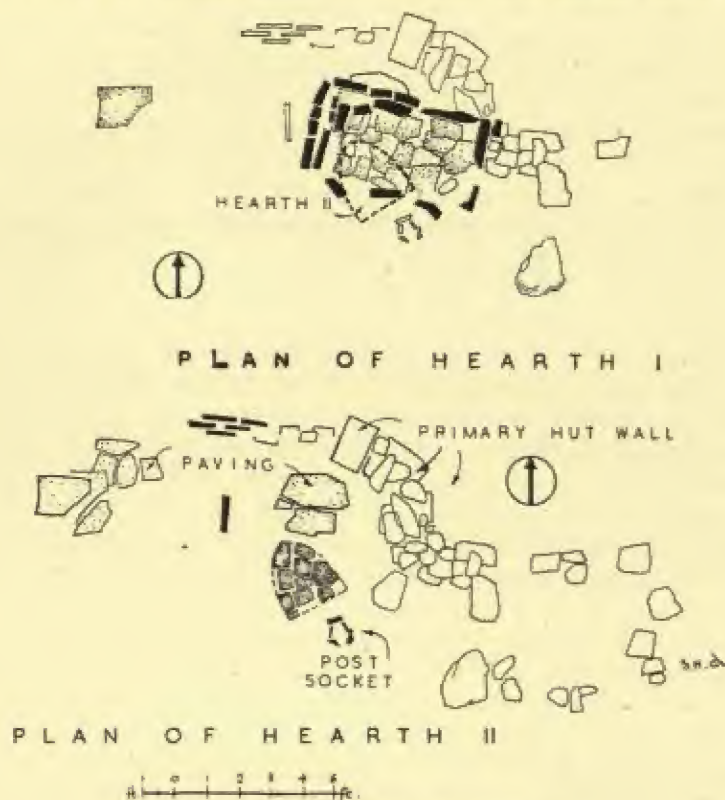


Fig. 5. Hearths under Rampart.

hidden behind a mass of débris or had been pulled down, and the scatter of stones along the rampart crest had at these breaks an appearance of being heaped, unlike the general distribution obtaining elsewhere.

In the middle of the rampart, 3 feet below the top of the core, lay a well-made hearth, and this lay upon another (fig. 5 and Pls. XI, XII). The lower or primary hearth lay in a deposit of sticky black soil which was not found over the whole area of the excavation, but mainly beneath the eastern end of the rampart. The deposit varied in depth according to the dips and crevices in the rock upon which it spread. Its average depth was 9 inches, and it died out upon the sloping rock a few feet

beyond the inside and outside faces. In one of the crevices was a pocket of about 50 pieces of carbonised twigs neatly cut into small sections. Almost all the pieces were hazel (*see* the charcoal analysis appended). The approximate depth from the top of the core to the primary hearth is 4 feet. This hearth (hearth II in figure) is the shape of a flat-iron on plan, 2 feet 6 inches by 1 foot 8 inches in area. It has no kerb and is skilfully built with shaped sandstone blocks upon a 3-layer foundation of sticky black soil overlaid by blue soil, with sandy soil above. Each of these layers is 1 inch thick. The bottom layer contains packing stones carefully laid across hollows in the rock, for additional stability. At the apex of the hearth two thin stones, lying flat and close together, suggested paving. They rested upon less than 2 inches of soil. Six inches behind the straight side of the hearth was a post-socket. It consisted of five thin small stones standing upright and firmly embedded in the sticky earth. They were so placed, corner to corner, that they formed a roughly circular socket, 7 inches in diameter and 9 inches deep. About the hearth curved the stone foundations of a hut wall, built upon the rock. The wall described the N.E. quadrant of a circle of radius 4 feet round the hearth, and lay wholly beneath the rampart, the N. end of the curve being tangential to the outer face (Pl. XI, 2). The wall was built of small stones, 6 by 6 by 2 inches, and stood 1 foot 6 inches high and 2 feet wide. One large stone, 2 feet by 1 foot 6 inches by 9 inches, ran through from outside to inside as a binder. At the south end of the curve the wall diverged into another curve, but only 2 feet of this was traceable. At the N. end there were three rows of thin slabs, 12 by 6 by 1 inch, placed end to end. The rows were half an inch apart, and the stones were upstanding and stood 2 inches above the secondary floor. The longest row consisted of three stones. The hearth was wholly circumscribed by the curve of the wall and was 1 foot 6 inches within it.

The upper hearth, hearth I, covered part of the wall, and was therefore built after its demolition. The upper hearth is separated from the lower by a heap of small stones (Pl. XI, 2), 9 inches deep, deposited, no doubt, to make up a level bed where the secondary floor was laid. It is rectangular, 5 by 3 feet in size, bounded by a double kerb and paved with thin sandstone slabs, 12 inches square and frequently overlapping. Small, thin sandstone blocks were wedged between the whinstone kerbstones for packing. Immediately beneath this hearth lay a piece of bead-rim *terra sigillata*, type 18/31, which provided a second-century *terminus post quem* for the building of the rampart. Several lumps of white powdery clay lay nearby.

The soil around both hearths was strewn with charcoal and unburnt bones of domestic oxen. The rampart core which overlay the hearths was not of turf, but of the made-up disturbed soil previously referred to.

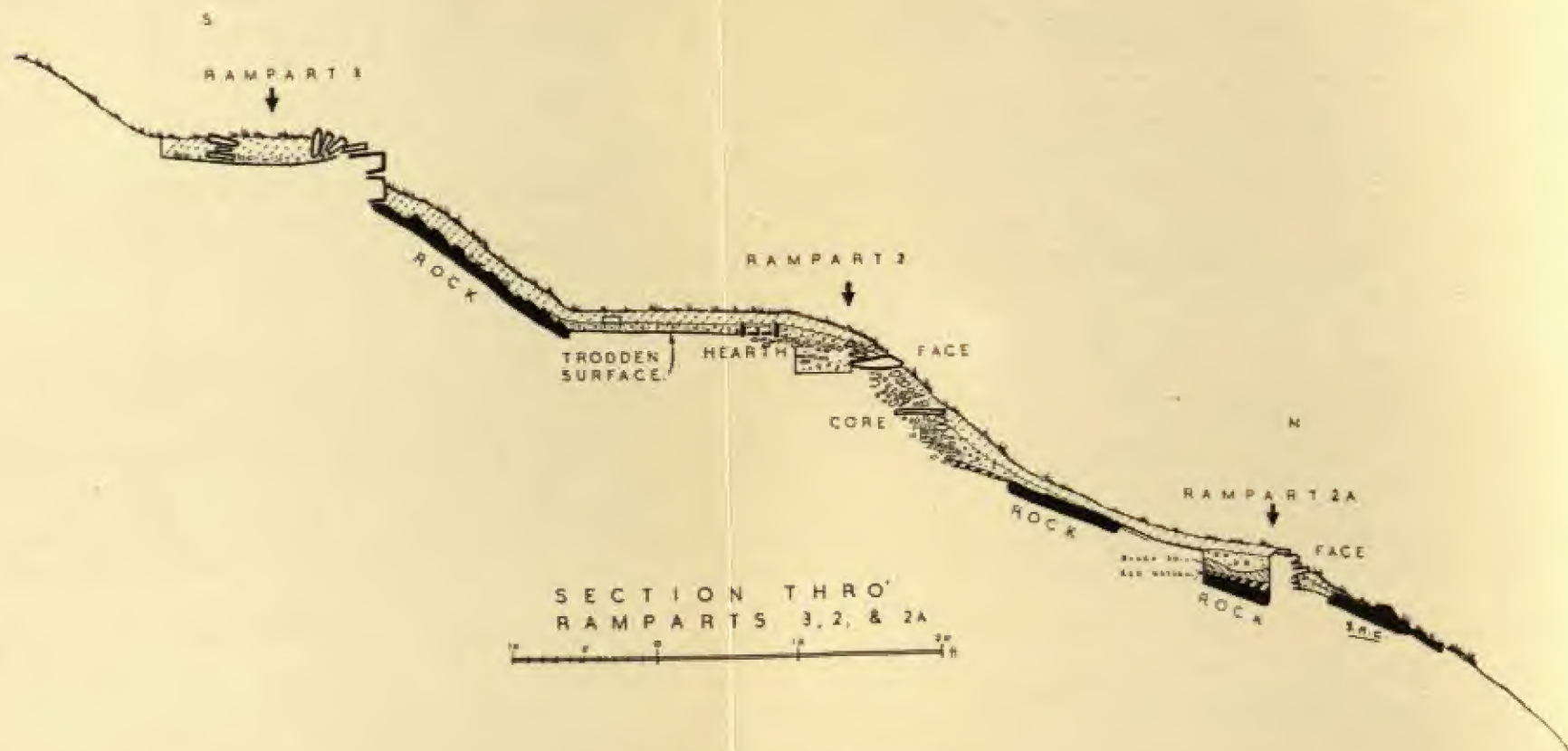


Fig. 6. Sections through Ramparts.

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The secondary occupation deposit, of moist brown earth, extended over the whole area exposed (fig. 4 and Pl. IX, 2), and was covered with fallen stones, which had no distinct architectural plan. Nothing of note was disclosed at the west end of the rampart, but beneath the east end was hearth I, and 8 feet east of that a platform of five large well-laid flat slabs, 3 feet square over all, which has been interpreted as the remains of another hearth. Near this platform, between it and hearth I, was a pocket of earth, about 12 inches in diameter and 9 inches deep, burnt bright orange and yellow.

We followed this deposit across the terrace to the rising rock, which was undercut at the occupation level as though to accommodate a shelter (section E F, fig. 4). The horizon of scattered stones lay 12 inches below the turf. It was impossible to define a beaten floor among the stones, and in only one place was it possible to distinguish between fall and foundation of huts. Two hearths (III and IV), both similar to hearth I, were discovered 8 feet and 12 feet out from the rock face, and 2 feet apart. They differed from hearth I in that they were bounded by one kerb, not two.

Six feet north of hearth III was a line of five post-holes, 12 inches deep and 9 inches in diameter, the first three being 12 inches apart, the other two about 2 feet 6 inches, and the total length of the row 7 feet 6 inches.

The secondary occupation deposit averaged 9 inches in depth and lay upon either the natural rock or the accumulations of rock splinters which filled the hollows, sometimes to a depth of 2 feet.

The finds are listed at the end of this paper.

An excavation was conducted farther west, on the north side of the hill, to determine the construction of ramparts 2 and 2A and their relationship with 3. Accordingly, an 8-foot trench was cut downhill through those ramparts (fig. 6).

The outside face of rampart 3 stands upon the rock, which slopes away from it downhill at an angle of 45 degrees to the terrace of rampart 2, and which is hewn in sharp ridges to discomfit attackers. Upon this terrace was a hearth, 6 by 2 feet in area, rectangular at one end and rounded at the other, and bounded by a kerb rising 6 inches above the floor. There was an obvious difference in the construction of the two ends. The rectangular end was well laid with whinstone flag paving and the kerb stones were soundly embedded and properly shaped. The rounded end was paved and kerbed with small rounded stones. Beneath the floor of this end there was dug earth and similar small stones. The rounded end gave the impression of being a distinct hearth, but no proof of this was obtained by excavation; two sherds of native pottery came from this hearth. A trodden surface, containing charcoal, extended from the hearth inwards towards the rock, dying out beneath three large stones lying flat, in a line

parallel to the rock face, as though they were the foundations of a wall of a hut or enclosure to which, perhaps, the hearth belonged.

A superficial scrutiny reveals that the outer facing stones of rampart 2 tilt inwards, like those of 3. However, in this instance, there is no inner face. The inward tilting stones project from the edge of the terrace as though they were the face of a revetment. The section taken through this rampart did not reach the rock face behind the revetment, but penetrated a core of small stones of 6 inches in diameter to a depth of 3 feet. Interspaced in the core, extending from the face to three feet within it, were several large stones lying flat and situated about 2 feet apart. At the top, where the rampart lay upon the terrace, the face stones have slid inwards on to a spread of small stones which may have been the original backing. At any rate, the face stones above the lip of the terrace must have been backed at one time by a core now gone, which had no inside face, as the turf-cored rampart had. The spread of stones extended inwards to the hearth and petered out beneath it. This suggests that the hearth was constructed after the fall of the rampart, but there is no stratigraphy to prove this. The beaten surface on the other side of the hearth does not spread over the face of small stones, so it is questionable whether the small stones under the hearth are a continuation of those outside or a separate bottoming heaped up for the hearth to lie upon.

Rampart 2A is similar to the above, but very much smaller. The vertical height of 3 is 13 feet from the terrace to the topmost horizontal facing course. The height of 2 is 10 feet, and of 2A 3 feet.

The intersection of ramparts 3 and 2, 60 feet west of this trench, was investigated. As we have said, there was no surface evidence to indicate that 2 did continue inside 3 or that it was ever anything else but a branch of 3, except for the difference in profile and its appearance of running, not into it, but under it. Excavation proved that 2 did indeed run under 3.

Across the hill, a hundred yards away and much higher up the slope, there is another isolated stretch of rampart identical in surface features with 2, and, likewise, running along the brow of a natural terrace and in the line that 2 would have taken had it continued. Half-way between this stretch and the point where 2 disappeared beneath 3, an 8-foot trench was dug across this terrace, on the presumed line of the rampart. A mass of tumbled stones was revealed, scattered down the slope of the terrace in a manner that suggested the demolition of a structure. No stones were in position, but, undoubtedly, walling had been constructed here at some time. The isolated stretch of rampart guards the roadway which leads uphill from one of the entrances at the west end. Thereby justifying its existence, it escaped the demolition which destroyed that portion of 2 rendered useless by the building of 3.



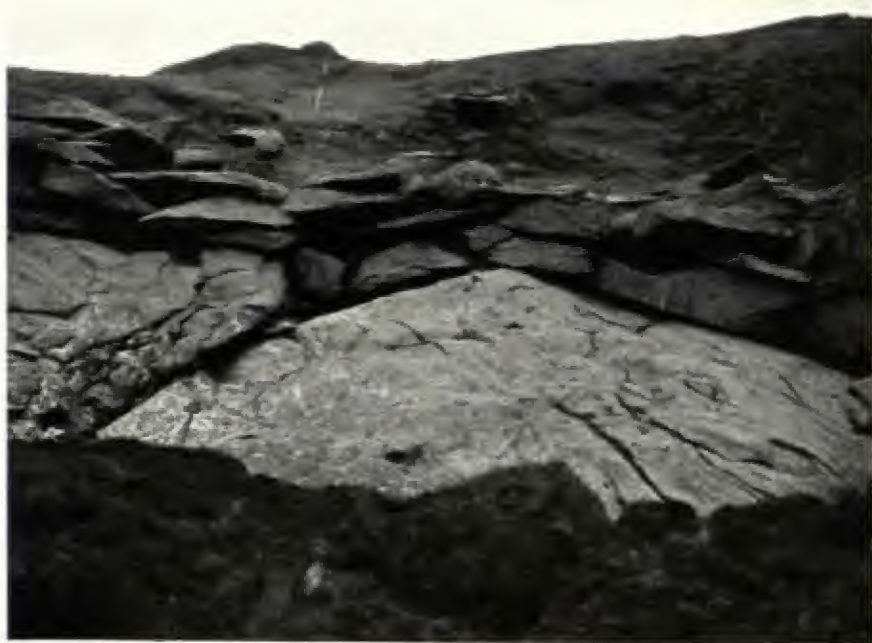
1. General view of Excavation.



2. Details of Rampart's inner face, upon secondary deposit.

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1. Outer face of Rampart.



2. Turf core of Rampart.



1. Hearth I.



2. Stones beneath hearth I and hut wall encircling them.



1. Hearth I.



2. Intersection of Ramparts 2 and 3.

The excavation at the intersection was simple. It was already revealed that rampart 3 crossed 2 as a distinct construction. This is shown in Plate XII, 2. There is no evidence of bonding one rampart into the other. The turf core of 3 had disintegrated and the earth was honeycombed with rabbit holes.

THE FINDS.

The Quarry Site.

Primary occupation deposit (fig. 7, a) :

- a. Native ware. Including buff-slipped sherds with oblique line of fracture. Most of the ware is very coarse, and large grits protrude on the surface.
- b. What appears to be the rim of a stone vessel. Mr Eckford, of the Geological Survey of Scotland, states that the ridges running across the piece are not natural lines of fracture. Unfortunately the top of the piece has been broken off.

Secondary occupation deposit (fig. 7, b) :

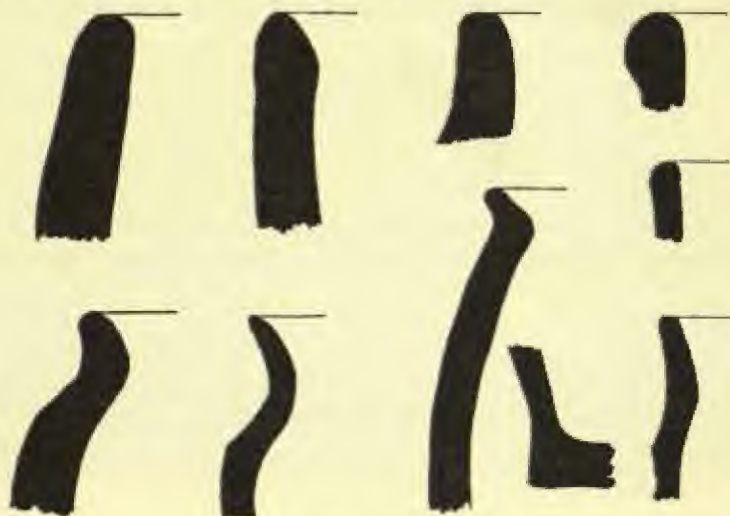
- a. Native ware, coarse, flat base.
- b. Roman ware:
 1. *Terra sigillata* rim 18/31. Beneath hearth, second century.
 2. Thin grey ware with lattice pattern, second to third century.
 3. Rim, thin grey ware, no lattice pattern.
 4. Fragment of flat-bottomed bowl or pie-dish of Roman fumed ware. Antonine date. Very common in Scottish forts of this date; never found in the first century. (I am indebted to Miss Anne Robertson of the Hunterian Museum, Glasgow, for this information.)
 5. Sherd of thin red ware with black slip.
- c. Three Silver Coins:

Roman Republican. (L. Valerius Acisculus, c. 45 B.C.). *Obv.* Head of Apollo or Sol, r. radiate; behind ACISC[VLUS]. *Rev.* Diana in galloping biga on r.: in ex., LVAL[ERIVS]. (*B.M.C.*, i. p. 536, No. 4110 ff.)

Vespasian. *Obv.* IMPCAESAR [VESPASIANVSAVG] Head of Vespasian r. laur. *Rev.* Pax seated l., bare to waist, holding branch in r. and having l. in her lap; around PON MAX[TR P COSVI] 75 A.D.

The third coin was too much corroded to admit of certain identification, but it may have been a Hadrian.
- d. Terret ring of iron; undecorated, with slot in middle of curve.
- e. Fragments of copper—thin narrow strips folded up, $\frac{1}{8}$ inch long.
- f. Cast ring pin-head of silver, shouldered variety with bosses.

- g. Lumps of iron, doubtful nail-heads, etc.
 h. Fragment of white opaque glass armlet (Kilbride-Jones type 3A.
Proc. Soc. Ant. Scot., vol. lxii. p. 377).



(a) Primary occupation deposit.



(b) Secondary occupation deposit.

Fig. 7. Rims and bases of pottery.

- i. Amber bead, red, translucent, segmental, perforated, $\frac{1}{8}$ inch diameter.
 j. Fragment of bead, golden, opaque, circular, perforated.
 k. Two worked flints:
 1. Flint knife with blunted back, thin flake of single-wing shape,
 longer side being working edge; good condition, unpatinated

and with sharp edge. Flaked one side only. Primary flaking on working edge; secondary flaking on blunted back.

2. Micro-blade, sharp edges.

l. Sandstone spindle-whorl.

m. Fragment, colourless glass rod with pointed end, $\frac{1}{2}$ inch long.

n. Miscellaneous stones, whetstones, pounders, rubbers, etc.

The turf core :

a. Thin grey sherds, one of Roman and two of native ware.

b. Fragments, iron and bronze.

c. Two small flint scrapers.

The disturbed soil above hearth 1 :

a. Fragment translucent glass armlet, pale green with white linear decoration.

b. Sherd native ware base.

c. *Terra sigillata* rim.

d. Piece of iron.

The trench through ramparts 3, 2, and 2A :

a. From the hearth—two sherds native ware.

b. From the foot of the face of 2—polished stone axe-head, badly chipped and worn: native sherds.

c. From the top soil—thin amber-coloured glazed ware, mediæval.

REPORTS ON CHARCOAL, STONE, AND BONE.

I wish to thank the following for their readiness to oblige and promptitude in sending me results:—

Mr M. Y. Orr, of the Royal Botanic Garden, examined the charcoal samples and provided the following information:—

The charcoal from the primary deposit at the quarry site is in the proportion, hazel, 59; willow, 8; oak, 3. (The samples for this analysis were taken from a crevice in the rock floor.)

Mr Eckford, of the Geological Survey of Scotland, analysed the specimens of stone and stated that none had necessarily been imported from a distant source. The stones were local whin, sandstone, and quartzite. The flint is obtainable from the rivers of the Lammermoors.

Miss Margery I. Platt, of the Royal Scottish Museum, states that the bones collected were wholly of domestic oxen.

I also wish to thank Sir George Macdonald, for describing the coins; and, in conclusion, to Professor Gordon Childe, who recommended me to the Office of Works for the supervision of the excavations, I desire to acknowledge my debt and express my appreciation.

VI.

THE CHRONOLOGY OF THE EARLY CHRISTIAN MONUMENTS
OF SCOTLAND. BY CECIL L. CURLE, F.S.A.Scot. (C. L.
MOWBRAY).

This paper is not intended to be a complete study of the early Christian monuments of Scotland. It is an endeavour to establish a classification and a tentative chronology, and to review the comparative material.

Although the whole collection of early sculptured stones in Scotland forms a very varied series, there is a main group of Christian monuments of a distinctive type of which there are more than a hundred still in existence. These are distributed over an area extending northwards from the River Forth as far as the Shetland Islands, and westwards to the Hebrides, the majority, however, being on the east coast (fig. 1). The uniformly Celtic character of their decoration makes it clear that in origin they go back to the period of the Celtic Church, and that they form part of the great group of early Christian monuments which extend over Ireland, the Isle of Man, Wales, and parts of England, as well as Scotland. But, although belonging to this series, the Scottish¹ sculptures show a definite originality. The slab with a cross, as opposed to the free-standing cross of Ireland and Northumbria, developed, as in the Isle of Man, into the national type of monument. It is an erect, rectangular slab of stone, sculptured in low relief, with a decorative cross on one or both sides of the monument, and the remaining space filled with ornamental or symbolic motives, animal carving, and figure scenes. The art is characterised by the extraordinary intricacy of the decorative motives and the vigour of the animal carvings.

Since Romilly Allen and Joseph Anderson published, in 1903, *The Early Christian Monuments of Scotland*, there has been no detailed study of these monuments. This book is still the standard work of reference on the subject. In it are photographs or drawings of all the monuments then known, and a detailed analysis of the decorative motives. It was followed, in 1904, by Romilly Allen's *Celtic Art in Pagan and Christian Times*. His is the pioneer work on the subject on which much of this paper is based. No very precise dating was at that time possible, and not much work had been done on the comparative material in the rest of the British Isles. Since then a considerable number of books and papers have been published on the art of the Celtic Church in Ireland and on

¹ Throughout this paper the word "Scottish" is used in its modern, and not in its mediæval, sense.

LEGEND

- PICTISH SYMBOL STONES
- PICTISH ANIMAL CARVINGS
- EARLY CHRISTIAN MONUMENTS
- CROSS SLABS 7th 8th & 9th CENTURY
- LATER CROSS SLABS 9th & 10th CENTURY
- + FREE STANDING CROSSES

6th & 7th
CENTURY



Fig. 1. Map.

the pre-Conquest crosses and carvings in England.¹ With this increased comparative evidence available it should be more possible to assign a date to the Scottish monuments, though this is still a difficult problem. Few of them bear an inscription and none which can be exactly dated, and the history of Scotland before the eleventh century is very fragmentary. It is only by reviewing all the early carved stones of Scotland² that it is possible to arrive at any conclusion. The earliest possible date for the first Christian examples may be accepted as some time in the fifth century, the period of St Ninian, and the latest probable date as the eleventh century, when, with the coming of St Margaret, Romanesque art began to reach Scotland from the south. Owing to the stylistic development that took place, the monuments can, to a limited extent, be placed in a chronological sequence. Many of the motives can be traced to a foreign source, arriving in Scotland in an already developed form, and it is chiefly by collating these different motives with dated examples in other countries that the conclusions given in this paper have been reached.

The Scottish type of cross-slab is fundamentally a manifestation of two arts, which, at an evolved stage, blend: Pictish art, native to the country, and Irish art, brought in by the Columban monks.

PICTISH ART.

The whole Pictish problem is too complicated to enter into in this paper.³ Whether the Picts were pre-Celtic inhabitants of Britain, or a first wave of Celtic invaders who mixed with the earlier population, is still a matter of controversy, but Watson considers them to be Celts, and, though he is nowhere explicit, implies that they are Brythonic.⁴ During the Roman occupation the name seems to have been applied to all the people north of the Roman frontier in Britain.⁵ They were a warlike people and were never Romanised. In the early Christian period in Scotland with which this paper is concerned they occupied all the north

¹ A list of abbreviations used in the footnotes will be found on p. 116. The principal books of reference for the British Isles used in this paper are the following:—

Scotland.—J. Romilly Allen, *The Early Christian Monuments of Scotland*.

Ireland.—F. Henry, *La Sculpture irlandaise and Irish Art*; R. A. S. Macalister, *Archæology of Ireland and Irish Epigraphy*; Father J. Ryan, S.J., *Irish Monasticism*; Dom Louis Gougand, *Christianity in Celtic Lands*; A. Mahr, *Christian Art in Ancient Ireland*.

England.—G. Baldwin Brown, *Arts in Early England and The Ruthwell and Bewcastle Crosses*; J. Brøndsted, *Early English Ornament*; W. G. Collingwood, *Northumbrian Crosses of the Pre-Norman Age*; A. W. Clapham, *English Romanesque Architecture before the Conquest*; T. D. Kendrick, *Anglo-Saxon Art*.

² I have not included in this paper monuments south of the Forth and Clyde (with the exception of a few in the Candida Casa district in Galloway), for they were either British or Northumbrian.

³ For various views on Picts see Watson, *Celtic Place Names*, p. 11; Pokorny, *History of Ireland*, p. 16; Macalister, *Ireland in Pre-Celtic Times*, p. 255; Hubert, *The Celts*, vol. I, pp. 203-8, etc.

⁴ Watson, *Celtic Place Names*, pp. 68-71.

⁵ See Eoin MacNeill, "The Pretanic Background in Britain and Ireland," *J.R.S.A.I.*, lxxxi, pp. 1-28.

and east of the country. In St Columba's time they were being gradually pushed back from the west coast by the Scots from Ireland, who had established the kingdom of Dalriada in Kintyre about the end of the fifth century.¹ When Bede completed his history in 719 their southern frontier was the Forth.² Their ethnic and national existence merged with that of the Scots when the two peoples were united under a Scottish king in the middle of the ninth century.

The art of the Picts is as enigmatic as their origin is obscure. The indubitable examples that they have left are the so-called "symbols," of which there are fourteen different types (fig. 2), used over and over again in different combinations. Eleven of these "symbols" are apparently abstract designs. These may possibly represent particular objects, but, if this is so, they are produced in such a stylised form as to be no longer recognisable. Of the remaining three "symbols," one is a fantastic animal with a long snout and lappet,

always shown in the same attitude with hanging tail and drooping, fin-like legs (fig. 2, *a*); the other two are simple objective representations, a mirror and comb (fig. 2, *e*), a hammer and anvil (fig. 2, *b*). No one has as yet succeeded in either dating them or explaining their origin or meaning. They are found over most of Pictish Scotland, unvaried in essential form, although differing slightly in decorative treatment. They are engraved on rough stone pillars, on the walls of caves, on small objects of stone,

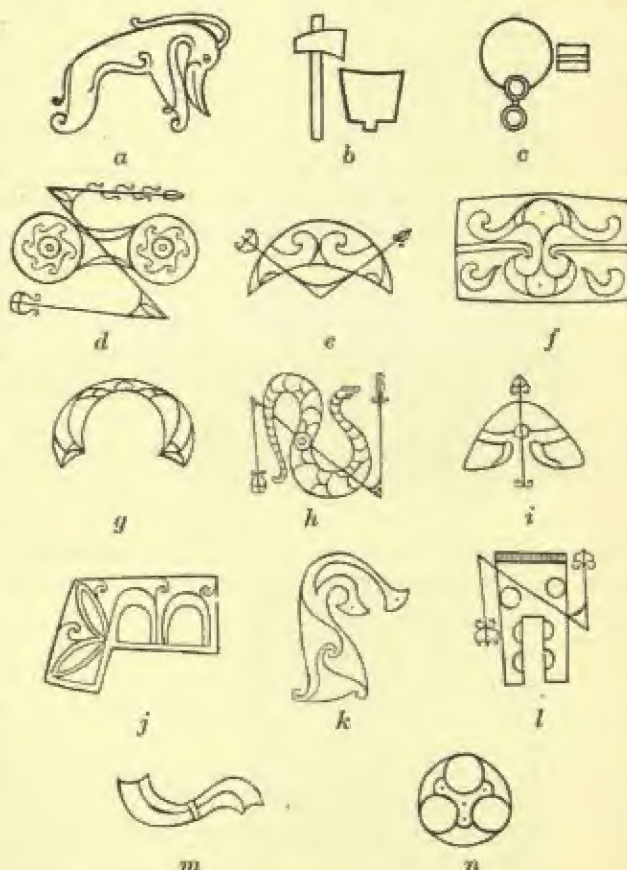


Fig. 2. Principal Pictish symbols.

¹ See Eoin MacNeill, *Phases of Irish History*, p. 133 sqq.

² Bede, *Hist. Eccles.*, iv. c. 20.

bone, and metal, and carved or incised on the majority of the main group of cross-slabs.

By far the greatest number of representations of these designs occur on the rough stone pillars generally known as "symbol stones," varying in height from 3 to 6 feet; occasionally on a natural boulder or on a pre-existing "standing stone" (Pl. XIII, *a*). There are more than a hundred and fifty still in existence, and on these are reproduced variations of all fourteen types of symbols. Their distribution extends from Shetland in the north to Perthshire in the south.¹ One example has been found outside this area in Galloway.² The greater number are on the east coast, there being nearly fifty in Aberdeenshire alone. There are no examples on the west coast of Scotland, but a few have been found on the western islands. The symbols are never found singly; there are always at least two, and sometimes as many as five or six, on the same stone. The four most common, the double disc and rod, the fantastic animal, and the mirror and comb, are found, one or other of them, on almost every symbol stone.

On the stone pillars are often associated with the symbols representations of animals: the fish, serpent, eagle, duck, stag, boar, deer, and wolf (Pl. XIII, *d*, and Pl. XV, *a*). In the same style and obviously belonging to the same period are a series of similar stone monuments whose only decoration is one of these animals (Pl. XV, *b*, and Pls. XVI, XIX, *a*, and XX, *a*). These are found, with one exception in Fife³ and one in Argyllshire,⁴ only in a rather limited area near Inverness. The style of the animal drawing is magnificently free, in marked contrast to the rather rigid patterns of the symbols. Although stylised and treated decoratively rather than realistically, the drawing is intensely virile. It is a hunter's art, the portrayal of animals with which, through long watching, the artist is closely familiar. In simple, decisive lines the essential characteristics of each animal have been seized: the strong curved beak and talons of the eagle, the heaviness of the bull, the grace of the deer, the light movement of the wolf. Here is clearly not an imitated art, although certain superficial features may have been borrowed; it is too alive and free, the animals are all native to Scotland and are those which the hunter artist would most intimately know. That such a spontaneous art is possible is shown by the pre-historic cave drawings and painted animals of Altamira, where again it is a hunter's art, with the form of the animal reduced to essentials. But although it seems to be a spontaneous art, created by the Picts, it does nothing towards settling the question whether or not they were a Celtic people; for, although on the whole Celtic art is confined to abstract design,

¹ All the "symbol stones" and most of the places mentioned in this paper can be found in the *Map of Britain in the Dark Ages, North Sheet*, published by the Ordnance Survey Office, 1938.

² *E.C.M.S.*, p. 478, fig. 508.

³ East Lomond Hill, *P.S.A.S.*, ix, p. 33, fig. 2.

⁴ Dunadd, see p. 67, and pl. XV, *b*.

a



b



c



d



a, Edderton, Ross, 10½ feet high.
b, Invereen, Inverness, 4 feet high.

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c, Dunnichen, Angus, 4½ feet high.
d, Knowe of Burrian, Birsay, Orkney, 3½ feet high.

[To face page 64.



a

f



a



d



[Photo C. L. C.



[Photo C. L. C.



[Photo C. L. C.

Late Celtic Metalwork.
a, Dublin Museum; b, Dublin Museum; c, British Museum. After F. Henry.

Pictish Symbols.
d, Clynekirkton, Sutherland, 4 feet high; e, Clynekirkton, Sutherland, 4 feet high; f, Abernethy, Perthshire, 2½ feet high.



18



b

a, Easterton of Roseisle, Morayshire, 4 feet high.

b, Dunadd, Argyll.

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[Photo C. L. C.]



[Photo C. L. C.]



[Photo C. L. C.]



a



e



1 inch

f

a, Mortlach, Banffshire; *b*, Dunachton, Loch Inch, Inverness-shire; *c*, Andross, Ross-shire; *d*, Inverness;
e, Newbigging, Leslie, Aberdeenshire; *f*, Silver objects, Norries Law, Fife.



a



b [Photo P. Henry.



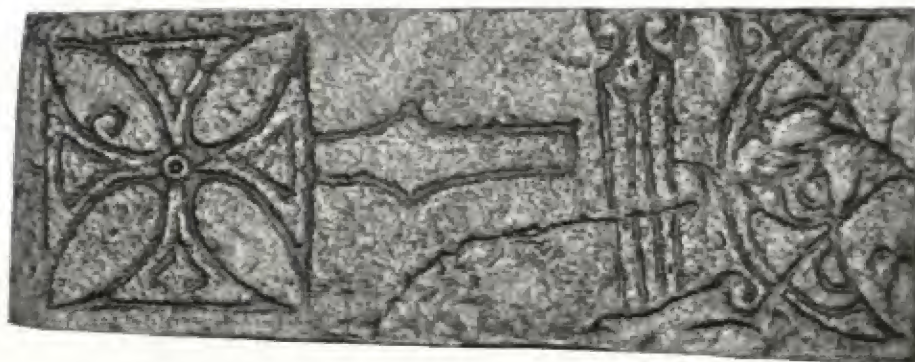
c



d

a, Kirkmadrine, Wigtownshire, 6½ feet high; *b*, Ballivourney, Co. Cork, 3 feet high;
c, Papa Westray, Orkney, 2 feet high; *d*, Balblair, Inverness-shire, 4½ feet high.

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c

a, Whithorn, Wigtonshire, 4 feet high; b, Inishken North, Co. Mayo, 5½ feet high; c, Ransay, Skye, 4½ feet high.



b

[Photo F. Henry.

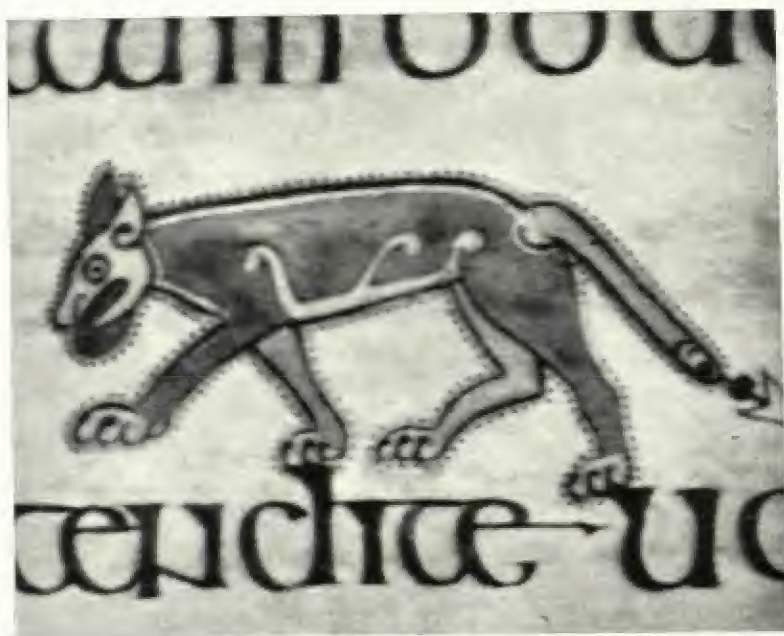


a



a

[Photo C. L. C.]

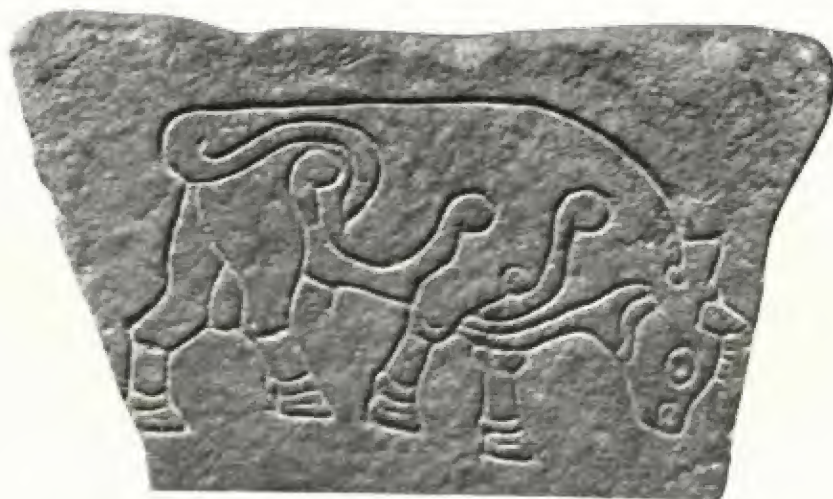


b

[Photo F. Henry.]

a, Wolf, Ardross, Ross-shire; b, Wolf from Book of Kells.

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a

[*Photo British Museum.*



b

[*Photo F. Henry.*

a, Bull, Burghead, Morayshire; *b*, Lion from Book of Darrow.

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a



b

a, Rayne, Aberdeenshire, 2½ feet 10 inches high.
b, Birsay, Orkney, 6 feet high.



Latheron, Caithness, 3 feet high.

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a

[After F. Henry.

b

[Photo Cairo Museum.

a, Fahan Mura, Co. Donegal; *b*, Coptic funeral slab.

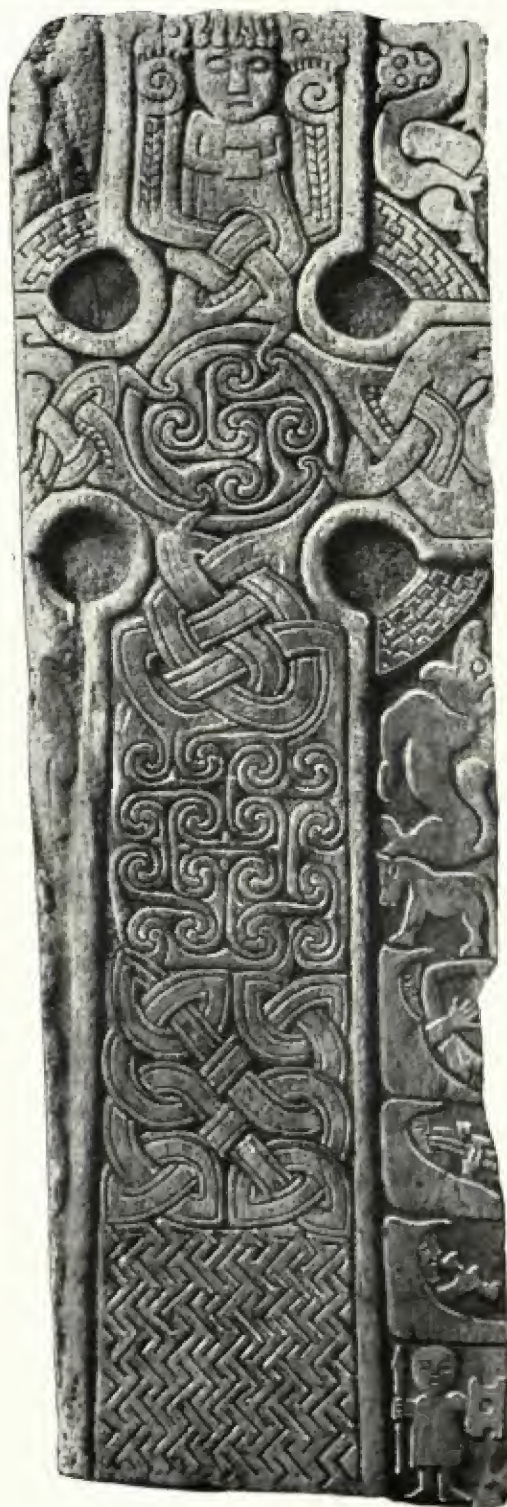


a



b

a, Papil, Shetland, 7 feet high; *b*, Page from Book of Durrow.



Ardochattan, Argyllshire, 6½ feet high.



[Photo C. L. C.



[Photo O. G. S. Crawford.

Glamis, Angus, 8½ feet high.



a



b

a, St Vigeana, Angus, 5½ feet high; *b*, Fowlis Wester, Perthshire, 5½ feet high.



Golspie, Sutherland, 6½ feet high.

CECIL L. CURLE.

the Celts did occasionally produce extremely good animal art, for example the stylised engraving of a boar on the Witham shield¹ and the bronze boar from Hounslow.²

There is no means of knowing if the practice of erecting symbol stones continued over a long period or not. It seems unlikely that it should have done so, for the style of design, the technique of the engraving, and the type of monument appear to have remained unmodified, although there is considerable variation in the quality of design and workmanship; the best examples are found in Orkney and the extreme north of the mainland, while many farther south, particularly in Aberdeenshire, are very debased. Neither the age of the symbol stones nor the meaning of the symbols has been satisfactorily determined. Doctor Joseph Anderson dated them to the seventh and eighth centuries,³ while A. W. Clapham,⁴ on the strength of the apparent La Tène character of the mirror symbol, puts them as early as the fourth century.

Symbols, usually recognisable objects, and including the mirror and comb, were carved on funerary slabs in the Roman Empire, while the mirror and comb, the fish, the serpent, and the eagle attacking a fish, were used in early Christian symbolism too. It has been suggested that three of the objects carried in Roman Triumphs—helmet, shield, and spear—might have inspired respectively the "lily symbol" (fig. 2, *k*) (plume of a Roman helmet), the double disc and crescent (circular shields seen from the front and side),⁵ and the floriated rod, one end of which is pointed, the other rounded (spear). Although a composite origin of the symbols does seem possible it would be surprising if Roman influence, which did not in any case affect the cultural life of northern Scotland, should remain submerged to reappear after so long. There is in any case no evidence that the Pictish monuments had any funerary purpose. The bull and other animals have indeed been taken as totemic crests, but, like the animals of the cave drawings, these may have been connected with magical rites to ensure good hunting; hence also the spears, shields, etc.

An examination of their decoration and distribution does, however, give some clue to their origin and date. The majority of the symbols are symmetrical both in form and decoration. They are as a rule cut in the stone with a neat, triangular incision; there is no effect of light and shade, it is simply a line drawing. Often a compass has been used, both for the outline of the symbol and for the series of curves which forms its decoration. This type of decoration is so close to that of the Late Celtic metal-work of England and Ireland that a connection between the

¹ T. D. Kendrick, *Anglo-Saxon Art*, London, 1938, p. 6, fig. 1.

² *Ibid.*, pl. II, figs. 1 and 2.

³ *E.C.M.S.*, p. cix.

⁴ A. W. Clapham, *Antiquity*, viii. 1934, pp. 43-57.

⁵ The unusual symbol on a stone at Rayne (Pl. XXI, *a*) might be a rectangular shield with a spear behind it. J. Ritchie, *P.S.A.S.*, i. p. 283.

two seems almost certain. Although such a style is not necessarily Celtic, since the use of compass-drawn curves in a circumscribed space must inevitably result in a somewhat uniform pattern,¹ yet it seems improbable that two similar systems of design should be found in adjoining countries if there were no connection between the two. The question remains whether it is the natural art of the Picts developing along parallel lines with Celtic art in the rest of the British Isles, or whether it was taken by the Picts from their neighbours, the British and Irish. The latter explanation seems the more probable for several reasons. The decoration of the symbols is not Celtic in spirit—the characteristic freedom of design and the asymmetry of Late Celtic art are missing; the patterns are on the whole rather stereotyped and rigid. Although this might be due to the small space within the symbol into which the pattern had to be confined, it seems more probable that it was owing to their being imitated and not original design. This seems especially likely, as very few examples of Late Celtic metal-work have been found in the Pictish area in Scotland. In addition to a general resemblance, not only in the patterns employed but in the spacing of the patterns within their frames, with the champlevé enamels of the sixth and seventh centuries (Pl. XIV), there are detailed features of design which occur on the symbols as well as on these late enamels. Such are the development of a spiral into the head of a bird, to be seen on a sixth-century latchet and on sixth- and seventh-century handpins in the Dublin Museum,² and on symbol stones on South Ronaldsay³ and at the Knowe of Burrian in Orkney (Pl. XIII, *d*); also the design of "running spirals" which, in metal-work, makes its first appearance on a late type of hanging bowl escutcheon (Pl. XXIX, *a*),⁴ and which occurs on a symbol stone at Dunnichen, in Angus (Pl. XIII, *c*). From this it seems a justifiable inference that the symbol stones bear some relation to the metal-work of England and Ireland of the sixth and seventh centuries. Certain features of the fantastic animal symbol and of the animal carvings associated with the symbols, discussed later in this paper,⁵ appear to have been borrowed from Irish illumination of the late seventh century.

The distribution of the symbol stones gives further evidence of their date. With the exception of the boar at Dunadd (Pl. XV, *b*) there are no symbol stones or engraved animals in the Scottish territory to the west of Scotland. The Scots established the kingdom of Dalriada towards the end of the fifth century.⁶ At the time of the arrival of St Columba

¹ For example the discs of Mycenæ, on which some of the patterns are identical with designs on British hanging bowl escutcheons and with carvings on some of the Scottish cross-slabs.

² A. Mahr, *Christian Art in Ancient Ireland*, Dublin, 1932, pl. II, fig. 8.

³ *E.C.M.S.*, p. 21, fig. 17.

⁴ For the dating of these escutcheons see F. Henry, *J.R.S.A.I.*, lxxv., and *Irish Art*, pp. 36, 37, H. E. Kilbride Jones, *P.S.A.S.*, lxxi. pp. 209-240, and T. D. Kendrick, *Anglo-Saxon Art*, p. 51 *sqq.*

⁵ P. 75.

⁶ Eoin MacNeill, *Phases of Irish History*, p. 133 *sqq.*

in 565 there are varying accounts as to whether Iona belonged to the Picts or to the Scots.¹ Presumably, as Dr Joseph Anderson points out,² if the Picts had already been in the habit of erecting symbol stones before the sixth century some examples would have remained in what later became Scottish territory. The one exception, the boar at Dunadd, might be explained as the work of a raiding party of victorious Picts, for Dunadd was a place of great importance to the Scots during the whole history of Scottish Dalriada.³ In St Columba's time Skye was still Pietish,⁴ as were the Hebrides, and in both these areas symbol stones have been found, in two cases in Skye associated with the cross. At Pabbay⁵ the cross is a simple Latin one, probably added subsequently to the carving of the symbol, but at Raasay (Pl. XVIII, c) it has not only been carved at the same time as the symbol, but it is of a very distinctive type, to which a date can be attributed at about the end of the seventh century.⁶

Thus from all the evidence it seems that the symbol stones cannot be dated to earlier than the sixth century, the majority probably belong to the seventh century, while some may be as late as the eighth century.

A number of small objects engraved with Pictish symbols appear to be dated to the same period. Several of such objects have been found on broch sites in Orkney and Shetland. A small ox bone and a small pebble on which symbols were roughly scratched come from the Broch of Burrian in Orkney.⁷ They belong to a secondary occupation of the broch, and the fact that a Celtic Church bell came from the site gives the possibility of a date in Christian times. In Shetland a small stone disc engraved with the double disc symbol was found during excavations at Jarlshof.⁸ It can be approximately dated, on the analogy of other similar discs from Shetland, one from Gletness⁹ decorated with a design of curves common in late Irish metal-work, another from Jarlshof¹⁰ with a roughly drawn design of diverging spirals, which is also a late pattern. The other objects bearing symbols are in metal. A crescent-shaped plate of bronze from Laws, Monifieth, in Angus,¹¹ is engraved with the crescent symbol and floriated rod, with a runic inscription (which may have been added subsequently) on one side, and on the other the double disc and a dog's head. Their treatment is almost identical with that of the same symbols

¹ Bede (*Hist. Eccles.*, iii. c. 4) says that St Columba received the island from the Picts. The *Annals of Ulster* gives, under the year 573, "The death of Comgall, son of Comgall, . . . who granted the island of Ia to Colum-Cille."

² *E.C.M.S.*, p. ex.

³ J. Hewat Craw, *P.S.A.S.*, lxiv. p. 112 *seq.* The relics confirm the occupation of Dunadd during the period ascribed to it in history from the beginning of the sixth to the middle of the ninth century.

⁴ Adamnan (*Vit. Colum.*, i. c. 27) tells how an old Pictish chief called Arbrannan was baptised by St Columba in Skye.

⁵ Parish of Barra; *E.C.M.S.*, p. 112, fig. 115.

⁶ See p. 74.

⁷ *Archæologia Scotica*, v. pp. 360-361, and *E.C.M.S.*, pp. 25, 26.

⁸ A. O. Curle, *P.S.A.S.*, lxviii. p. 229, fig. 5.

⁹ J. M. Corrie, *P.S.A.S.*, lxvi. p. 83, fig. 13.

¹⁰ *P.S.A.S.*, xli. p. 33, fig. 16.

¹¹ *E.C.M.S.*, p. 280, fig. 298.

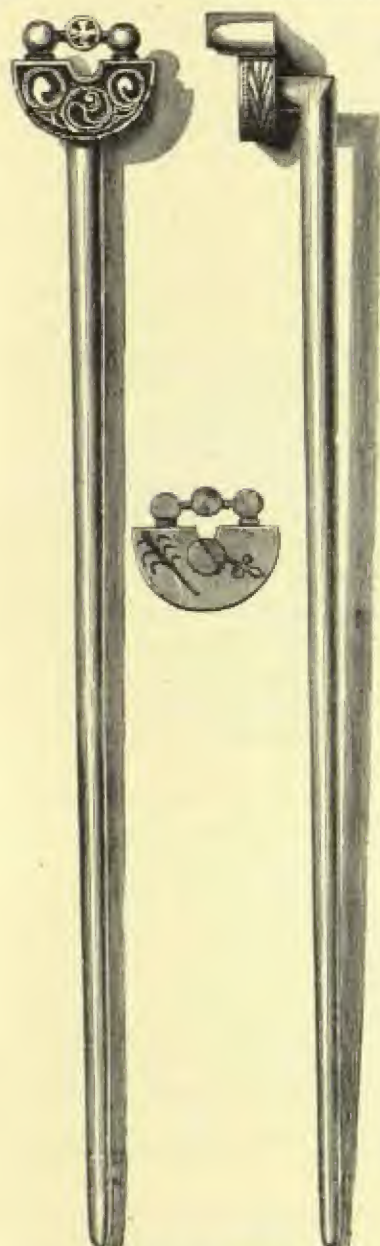


Fig. 3. Silver Handpin from Norrie's Law, Largo, Fife.

on two leaf-shaped objects in silver from Norrie's Law, in Fife,¹ showing traces of enamelling (Pl. XVI, *f*). Amongst other finds in the same hoard was a silver handpin, of a seventh-century type, which bears a Greek cross in a circle on the top, and symbols engraved at the side (fig. 3). The terminal rings of certain of the massive silver chains found in Scotland² bear engraved symbols, which from the type of the enamelling appear to be dated to the seventh or eighth century.

Caves in Moray³ and Fife⁴ have symbols roughly engraved on the walls, but no date can be suggested for these as the caves were in occupation over a long period.

The association of the cross with a Pictish symbol on the symbol stone at Raasay, and on the handpin from Norrie's Law, leads to the consideration of the second element in the cross-slab of the east of Scotland (on which Pictish symbols appear amidst the Christian motives)—the introduction of Irish Christian art into Pictish Scotland.

INTRODUCTION OF CHRISTIANITY.

The first mission to the Picts was that of St Ninian, who established his see in Galloway during Roman rule in Britain, probably soon after the death of St Martin in 397. The earliest and traditional account is given by Bede,⁵ who tells how

The Southern Picts, who dwell on this side of these mountains, had, it is said, forsaken the errors of idolatry, and received the true faith by the preaching of Bishop Ninias, a most reverend and holy man of the British nation, who had been regularly instructed at Rome in the faith and mysteries of the truth; whose episcopal see,

¹ *P.S.A.S.*, xviii. p. 233.

² J. A. Smith, *P.S.A.S.*, x. p. 321 *sqq.*; A. J. Edwards, *ibid.*, lxxiii. 326.

³ *E.C.M.S.*, p. 129 *sqq.*

⁴ *Ibid.*, p. 370 *sqq.*

⁵ *Hist. Eccles.*, iii. c. 4.

named after St Martin the bishop, and famous for a church dedicated to him (wherein Ninias himself and many other saints rest in the body). . . . The place . . . is commonly called the White House¹ because he there built a church of stone, which was not usual among the Britons.

Three Christian monuments, of a type belonging to the Brito-Roman Church and best represented in Wales and Cornwall, have been found not far from Candida Casa at Kirkmadrine,² in Galloway. They are rough stone pillars, two of them about 7 feet in height, the third somewhat less than 3½ feet. Each is engraved with a stylised version of the Chi Rho, which has been reduced to a Greek cross with expanded ends, a comma-like appendage to the upper arm being all that remains of the Rho; the cross is enclosed in a circle, and there is an epitaph in Latin below (Pl. XVII, *a*). They have been dated, by the form of the letters and the style of the epitaph, to the period of St Ninian.³ No monuments of this type are found north of the Forth in Pietish territory. No more is heard of St Ninian's mission, and St Patrick, writing about the middle of the sixth century, speaks of the Southern Piets already as apostates.⁴

The next mission to the Piets was that of St Columba in the year 565. Iona was founded at a time when the monastic development of the Irish Church was reaching its height, and St Columba, before he came to Scotland, had already founded several monasteries in Ireland. Iona was essentially an Irish monastery, and remained so until the monks fled from it before the invading Vikings in 806. It was no mere offshoot, but the parent house of an extensive "paruchia" which soon extended to England as well as Ireland and Pietish Scotland. Scottish Dalriada was both politically and racially Irish. St Columba himself in the thirty-two years that he was abbot of Iona, in addition to numerous journeys to Pietish territory, often revisited Ireland. Adamnan gives a picture of constant coming and going between the two countries in the Saint's time; hardly a day seems to pass when a stranger is not heard "shouting across the strait," and he himself, when he was bishop and abbot of Iona, is clearly much more familiar with the topography of Ireland than with that of Scotland.⁵ But Iona, though an Irish monastery, was constantly engaged in the conversion of the Piets; for nearly half a century after the coming of St Columba there seems to have been peace between the Piets and the Scots.

Little is known of the early monasteries on the mainland of Scotland. As in Ireland, where the monasteries of the plains have been almost

¹ Ad Candidam Casam.

² *E.C.M.S.*, p. 404 *seqq.*

³ A. W. Clapham, *English Romanesque Architecture before the Conquest*, p. 5.

⁴ *St Patrick's Confessio et Epistola*, ed. N. J. D. White. London: S.P.C.K., Texts for Students, No. 4, 1918; cf. Dom Louis Gougaud, *Christianity in Celtic Lands*, p. 26; W. Douglas Simpson, *Celtic Church in Scotland*, pp. 62, 67.

⁵ An example of the close touch Adamnan kept with Ireland is given by the story of the monks of Clonmacnoise who, in a contest over the abbacy, appealed to him to appoint an abbot for them. E. J. Gwynn and W. J. Purton, *P.R.I.A.*, xxix. c., p. 162, para. 85.

entirely destroyed, so in Scotland it is only on desolate islands, where the land had little value, that traces remain of early church settlements. The love of the Irish monks for island sites, both for their monasteries and for the cells of anchorites, could be easily satisfied in Scotland, in the islands of the west and north as well as in Dalriada. Until much more excavation has been done, not a great deal can be known of the Columban settlements in Pictish Scotland, but there are a number of sites which, from their close resemblance to early church settlements in Ireland, seem certainly to belong to the Columban Church. For example, in the Hebrides there is a primitive oratory dedicated to St Flannan, and a double-chambered cell on Eilean Mor in the Flannan Isles;¹ on the little island of North Rona is found the chapel of St Rona—"Teampul Rona"—and a small cell.² Dicuil, an Irishman writing in 825, says: ³

There are many other islands in the Northern Ocean, two days and two nights sail from the "Northern Islands" of Britain. A certain cleric on whom I can rely, told me how, having sailed for two days and one night, he landed on one of these islands, which are for the most part small and separated from one another by narrow channels. They were inhabited by Scottish hermits about one hundred years ago; but just as they had lain waste from the beginning of the world, so now they are again desolated by the incursions of the Northmen. They are full of sheep and innumerable sea birds of different kinds.

During St Columba's lifetime Orkney was visited by his monks. Adamnan, in his account of the voyages of the monk Cormac, tells how ⁴

St Columba, who was staying in those days beyond the dorsal ridge of Britain, commended him [Cormac] to King Brude in the presence of the under-king of the Orkneys, saying, "Some of our people have lately gone forth to find a solitude in the pathless sea, and if perchance after long wanderings they should come to the Orcades Islands, do thou earnestly commend them to this under-king, whose hostages are in thy hand, that no misfortune befall them within his territories."

Cormac was saved from "impending death in the Orcades" by these recommendations, and returned to Iona after some months. It is very probable that the islands, once visited, would be noted down for future settlement, and traces have been found there of the Columban Church. Three Celtic Church bells of an early type ⁵ have been found on the mainland of Orkney, one from Saevar Howe at Birsay,⁶ another from what is probably a monastic site on the tidal island of the Brough of Birsay,⁷

¹ T. S. Muir, *Ecclesiological Notes on Some of the Islands of Scotland*, pp. 58-60, Edinburgh, 1885.

² *Op. cit.*, pp. 92-95.

³ See Mario Esposito, *Dublin Review*, 1905, ii. p. 335, and *Studies*, 1914, p. 651 *agg.*

⁴ Adamnan, *Vit. Colum.*, ii. c. 43.

⁵ See F. C. Eccles, *P.S.A.S.*, ix. pp. 409-420. The early type of Celtic bell is made of a sheet of iron bent into a roughly quadrangular form, riveted and dipped in copper or bronze. The later tenth-century type is a complete casting.

⁶ James Farrer, *P.S.A.S.*, v. pp. 9-12.

⁷ Excavated by the Office of Works in 1936, not yet published.

and a third from the Broch of Burrian,¹ from whence came the bone and pebble, engraved with Pictish symbols, which have already been mentioned in this paper. There are remains of a monastic settlement on the Brough of Deerness. These have not yet been excavated, but they appear, from surface indications, to follow in plan the smaller Irish monasteries.² On the island of Papa Westray, at a place called Munkershouse, there are groups of circular huts with connecting passages. On the same island there is a typically Irish site, a small peninsula in a lake, and here there is a small oratory and the ruins of beehive huts. On this island was found a slab engraved with a cross in a circle, surmounted by a Latin cross with expanded terminals (Pl. XVII, c). This has been thought to be a type of cross derived directly from that of the Kirkmadrine slabs and therefore belonging to St Ninian's Church. This, however, is not so; the cross formed by the intersecting arms of a circle within a circle, though uncommon in Scotland, is found over a wide area in Ireland in the second half of the seventh century, as well as in the Christian East and in Gaul.

PRIMITIVE IRISH AND COLUMBAN CROSS-SLABS.

After the withdrawal of the Romans when the churches in Britain and Ireland were cut off from the Continent by the invasions of the pagan Saxons, the two countries remained in close touch with one another, and the British Church in the south of Scotland had an important influence in Ireland,³ where Candida Casa was celebrated as a school of monastic training.⁴ Amongst the most famous of its Irish pupils was St Enda of Aran, whose pupil St Finnian founded the monastery of Clonard, where St Columba underwent part of his training.⁵ In view of this close connection it is not surprising that similar types of Christian monuments should be found in Ireland, the Candida Casa district, Iona, and in the Columban sphere of influence in Pictish territory. Between the fifth and seventh centuries it is impossible to date any monuments exactly, but at the earliest monasteries in Ireland there was generally an upright slab carved with a cross,⁶ and a similar type of slab is found at various monastic sites in Dalriadic Scotland and the western islands, for example on Eilean na Naomh⁷ and Tiree.⁸ These monuments bear the simplest form of Latin cross, but there were other more elaborate types. Such

¹ *Arch. Scotica*, v. pp. 300-61.

² *Inventory of the Ancient and Historical Monuments and Constructions of Orkney and Shetland*, by the Royal Commission on Ancient and Historical Monuments (Scotland), in the press.

³ See Father J. Ryan, S.J., *Irish Monasticism*, p. 107 *seqq.*

⁴ See *Catalogus S.S.Hib.*; Haddan and Stubbs, *Councils and Ecclesiastical Documents relating to Great Britain and Ireland*, ii. p. 202, Oxford, 1869-78.

⁵ J. Ryan, *op. cit.*, pp. 106-20.

⁶ F. Henry, *Irish Art*, p. 27.

⁷ *E.C.M.S.*, p. 402, fig. 421.

⁸ L. M. Mann, *P.S.A.S.*, lvi. pp. 123-126.

is the form of cross derived from a ship, a motive going back to the earliest period of Christian symbolism.¹ This is found, with the ship reduced to a few stylised lines, at Drumore (fig. 4) and at Kirkmadrine² in Galloway, at Cloon Lough³ and Kilshanig⁴ in Ireland. Another type bears small crosslets within the arms of the cross, a motive found on a piece of fifth-sixth-century Coptic cloth in the British Museum. This occurs on slabs



Fig. 4. Cross-slab from Drumore, Kirkmaiden, Wigtownshire.

at Laggangarn⁵ and Craignarget⁶ in Galloway and, amongst other places in Ireland, at Inishmurray.⁷

None of these monuments have any clearly dateable character. Mlle. Henry considers their origin to be a composite one, in part derived from the almost purely Latin funerary monument of the Brito-Roman Church (of a type already described at Kirkmadrine), in part from St Patrick's custom of "engraving crosses" on stones or rocks venerated by the pagans.⁸

¹ Graves, "On Similar Forms of the Christian Cross found on Ancient Monuments in Egypt and Ireland," *J.R.S.A.I.*, 1890, i. p. 346 *seq.*

² *E.C.M.S.*, p. 500, fig. 543.

³ F. Henry, *Irish Art*, pp. 30, 31 (figs. 11 and 12).

⁴ F. Henry, *J.R.S.A.I.*, 1937, p. 274.

⁵ *E.C.M.S.*, p. 501, figs. 545, 546.

⁶ *Ibid.*, p. 498, fig. 541.

⁷ W. F. Wakeman, *A Survey of the Antiquarian Remains on the Island of Inishmurray*, fig. 23, Edinburgh, 1893.

⁸ F. Henry, *Irish Art*, pp. 28, 29.

SEVENTH-CENTURY CROSSES AND CROSS-SLABS.

With the seventh century there began a period of great artistic activity in Ireland—the development of Celtic Church art—not only on stone monuments, but also in illuminated manuscripts, and in metal-work on such objects as reliquaries, croziers, etc. The chief decorative motives have been analysed by Mlle. Henry in *La Sculpture irlandaise*. Summed up briefly they are: the spiral, derived from metal-work of the Late Celtic period; interlacing,¹ a new form in Celtic art, later to succeed the spiral in popularity; angular designs of fret and key pattern; and animal interlacing, derived from Germanic forms,² and showing a connection with Saxon art and the seventh-century Anglo-Saxon ribbon style.³ All these motives are found in a dated form in the Book of Durrow,⁴ which was executed in a Columban monastery about the year 670.⁵

Dalriadic Scotland shared too in this artistic development. It is possible that the Book of Durrow was transcribed at Iona.⁶ Of metal-work, the most important surviving example is the Monymusk Reliquary,⁷ with its decoration of writhing animal forms, not yet certainly dated but probably going back to the seventh century, if not actually to St Columba's time.

On the stone monuments of this period the carving became more decorative and elaborate, and carving in relief appeared as well as engraving. The compass-drawn cross became for a time one of the most popular forms. It has already been described at Papa Westray,⁸ in Orkney, where it is surmounted by a Latin cross with expanded terminals (Pl. XVII, c). A further development occurs when it is accompanied by other motives. At Ballivourney,⁹ Cork, the cross is surmounted by the engraved figure of a little man with strangely pointed nose and flowing locks (Pl. XVII, b). The connection between the Ballivourney figure and the portrait of St Matthew in the Book of Durrow¹⁰ is unmistakable. A rather similar little figure, leaning on a staff, is engraved on a boulder at Balblair,¹¹ near Inverness (Pl. XVII, d); and another curious little figure, also shown in profile and wearing a long cloak, is engraved on a slab found in the ruins of a broch at Burness,¹² Firth, Orkney. Other monuments, still

¹ The derivation of interlacing in Irish art is a complex question: simple interlacing was used in the East from 3000 B.C. and was common in Roman art, but the elaborate interlacing with knots appeared at about the same period (the seventh century) in Egypt, Sweden, the British Isles, and Lombardy. F. Henry devotes a chapter to it in *La Sculpture irlandaise*, pp. 89–101.

² See B. Salin, *Thierornamentik*, pp. 245–70.

³ F. Henry, *Irish Art*, pp. 41, 42.

⁴ Dublin, Trinity College, 57 (A, 4.5). Zimmermann, iii. (Pls. 1–5).

⁵ See F. Henry, *Irish Art*, p. 63 *seq.*, and T. D. Kendrick, *Anglo-Saxon Art*, p. 94 *seq.*

⁶ F. Henry, *Irish Art*, p. 68.

⁷ F. C. Eeles, *P.S.A.S.*, lxviii. pp. 433–438, pl. VI.

⁸ See p. 71.

⁹ F. Henry, *J.R.S.A.I.*, lxvii. p. 271.

¹⁰ Folio 245 b.

¹¹ *E.U.M.S.*, p. 95.

¹² H. Marwick, *P.S.A.S.*, lviii. p. 295 *seq.*

with the compass-drawn cross, have a pattern of spirals beneath the cross, as at Inishkea North,¹ in Ireland, where they form a stem (Pl. XVIII, *b*). At Whithorn, in Galloway, there is a very similar cross with a stem, ultimately derived, as is shown by the comma-like appendage to the upper arm of the cross, from the early type of monument with the Chi Rho at Kirkmadrine (Pl. XVIII, *a*).² Below the cross there is an inscription in Latin: LOC STI PETRI APOSTOLI.³ Apart from stylistic evidence, the monument can be dated to about the end of the seventh century, for the dedication to St Peter would not have been used before 664, when at the Synod of Whitby the Roman usage was adopted in Northumbria and St Peter took a chief place in dedications.⁴ Additional evidence comes from Ireland, for at Kilnasagart,⁵ County Armagh, a pillar engraved with crosses bears an almost identically worded inscription, but in Irish instead of Latin, and mentioning a certain Ternoc, who is known to have died in 714. With the Whithorn monument can be associated two slabs from Raasay,⁶ in Skye, which bear a similar cross with a stem and the rudiment of the Rho, but with the cross set in a square instead of in a circle. One of these monuments has already been mentioned⁷ in connection with the Pictish symbols with which it is engraved in addition to the cross (Pl. XVIII, *c*). A rather more elaborate form of cross with a stem is found at Kilmory Knap⁸ in Argyllshire, and at Glendalough,⁹ in Ireland.

There are other examples of the Greek cross in a circle, carved in low relief, on slabs at Clad Bhile,¹⁰ Ellery, in Argyllshire, and at Abirlot,¹¹ in Angus. A more elaborate form of this type of cross is found at Inishmurray,¹² Sligo, where the cross is decorated with simple interlacing, carved in light relief, with a decorative arrangement of spirals between the arms. This is very similar to the fragment of a slab from St Donnans,¹³ Eigg, which has, however, triquetras between the arms instead of spirals.

These examples are sufficient to show the close connection that continued between Ireland and the Columban sphere of influence in Scotland. And the Irish monks in their missionary journeys into Pictish territory must have become familiar with Pictish art, of which some traces appear in Irish manuscripts, and it seems possible that some decorative features of Pictish animal art may have been borrowed from Irish illumination.

¹ F. Henry, *Irish Art*, p. 55.

² See p. 69.

³ See R. A. S. Macalister, *P.S.A.S.*, lxx. p. 315 *sqq.* for a different reading of the inscription.

⁴ See pp. 81, 82.

⁵ G. Petrie, *Christian Inscriptions in the Irish Language*, ii. p. 27, Dublin, 1872 and 1878.

⁶ J. S. Richardson, *P.S.A.S.*, xli. p. 435.

⁷ See p. 68.

⁸ *P.S.A.S.*, lxix. p. 19, fig. 7.

⁹ F. Henry, *La Sculpture irlandaise*, pl. 6, fig. 5.

¹⁰ *E.C.M.S.*, p. 401, fig. 418.

¹¹ F. Wakeman, *A Survey of the Antiquarian Remains*, fig. 27.

¹² *P.S.A.S.*, lxvii. p. 66, fig. 4.

¹³ *Ibid.*, p. 205, fig. 222.

A comparison of the bull from Burghead (Pl. XX, *a*)¹ and the wolf from Ardross (Pl. XIX, *a*) with the lion of St Mark in the Book of Durrow (Pl. XX, *b*) and a drawing of a wolf in the Book of Kells (Pl. XIX, *b*) show many points of close resemblance. One of these is the inner decorative line ending in a spiral, which occurs in all these animals. This is only a formal decorative feature which might have come independently to Ireland and Scotland from the same foreign source. The inner decorative line and the emphasis of the articulations of the body is a decorative feature common in the East; it is found in Assyrian, Scythian, and Sassanian art. Much later it became a part of Teutonic and Scandinavian animal design. It is a constant feature of the Pictish engraved animals. It is usually present in Irish metal-work, and is found in all animal interlacing in Ireland in the eighth century. This feature taken alone is not enough to show a connection, but there are other features of these Pictish and Irish animals which are closer parallels. For instance, the eye of the bull of Burghead and that of the lion of the Book of Durrow are drawn in the same way; the ear of the Pictish wolf is connected with the spiral termination outlining the jaw, and is noticeably small in proportion to the size of the animal, and the same feature is found in the lion of the Book of Durrow. The wolf of the Book of Kells might almost have been a copy of the Pictish wolf; in this case there seems little doubt that the influence went from Pictish to Irish art. On the other hand, the Pictish "fantastic animal" symbol is merely another version of the animal with the lappet of the Lindisfarne Gospels² and must be derived from the same source—the Teutonic animal (Salin Style II)³—which is found in an earlier form in the Book of Durrow (fig. 5).

It is clear from the two symbol stones with crosses on them, already described, at Raasay and Pabbay, that the symbol stones were still in use at the coming of Christianity. In the north and east of Scotland there are a few other examples of a transition stage between the symbol stone and the cross-slab.

A beautifully carved slab, now in the National Museum of Antiquities at Edinburgh, was found at the Brough of Birsay, in Orkney⁴ (Pl. XXI, *b*), on the same site as the Celtic Church bell mentioned earlier in this paper. At the top are engraved the double disc symbol, the crescent and rod, the eagle, and the "fantastic animal," all of the pure symbol stone type, but below these symbols are the figures of three warriors carrying spears and square, decorated shields; they are still incised but almost merging into light relief. While they are in style not unlike the figures of

¹ There are six very similar examples of engraved bulls from Burghead, *E.C.M.S.*, pp. 118-124.

² British Museum, Cotton Nero, D. 4. Dated to about 700. See E. G. Millar, *Lindisfarne Gospels*, British Museum, 1923, and Zimmermann, iii. pls. 223-244.

³ Salin, *Thierornamentik*, p. 322 sqq.

⁴ To be published in *P.S.A.S.*

ecclesiastics on cross-slabs, to be described later in this paper, at St Vigean and Fowlis Wester, they are still, with their oddly pointed noses, in the tradition of the figure on the slab at Ballivourney.

At Latheron, Caithness (Pl. XXII), there is a slab with a crudely carved cross, formed of a pattern of spirals and interlacing in low relief, surmounting an eagle and fish. This seems to be the eagle and fish of the symbol stones, re-interpreted as a Christian symbol.

On some of these half-Christian, half-Pictish monuments, as well as on some debased symbol stones on the east coast, there are ogham inscriptions. They have not yet been satisfactorily translated. In the opinion of Professor Macalister the Picts copied the ogham alphabet from the Irish, and in using it they were awkwardly adapting a script ill suited to their phonetics.¹

So closely do the earlier Christian monuments in Scotland resemble those in Ireland that there can be no doubt that they were the work of the Columban monks. The transitional group, however, all found in Pictish territory, and in

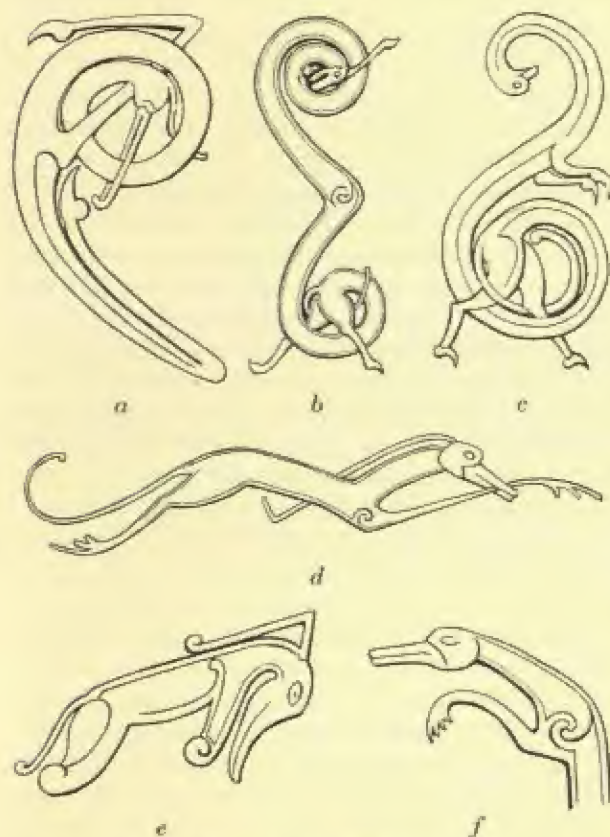


Fig. 5. Lindisfarne and Pictish Animals.
a and c, Animals from cross-slab, Aberlemno.
b and d, Animals from Lindisfarne Gospels.
e, Pictish "fantastic animal" symbol.
f, Animal from cross-slab, Meikle.

style far nearer to the symbol stones than to the Irish slabs, must surely be the work of recently Christianised Picts who later, under further influence from Ireland, were to evolve the type of monument characteristic of Pictish Scotland.

¹ R. A. S. Macalister, "The Inscriptions and Language of the Picts," *Essays and Studies presented to Prof. Eoinn MacNeill*, Dublin, 1940.

CARDONAGH GROUP.—LATE SEVENTH-CENTURY CROSSES AND CROSS-SLABS.

In the next stage of development in Ireland there occurs the transition between the cross-slab and the free-standing cross. At Cardonagh¹ (fig. 6) is found the earliest type of free-standing cross in Ireland which, from the analogy of its broad ribbon interlacing with that of the Book of Durrow, can be dated to the end of the seventh century. Beside the cross are two stone pillars,² obviously carved by the same hand as the cross. On them, amongst other motives, are shown David as a harpist, and Jonah and the whale. On the Cardonagh cross, and some approximately contemporary monuments at Duvillaun,³ Inishkea North,⁴ etc., are representations of the Crucifixion.

The Cardonagh group makes the first break-away from the simple pillar monument, with the cross, either alone or with a few simple decorative forms, as the only motive. In addition to the development of a new form of monument there is apparent a sudden influx of influence from abroad, and the first appearance in Ireland of Christian iconography.

Although from this time onwards the free-standing cross became the chief type of monument in Ireland, the cross-slab was not immediately abandoned, and it followed, for a time, a parallel development, as can be seen in the slabs of Cardonagh,⁵ Fербane,⁶ and Fahan Mura⁷ (Pl. XXIII, a), which are all that have survived the destruction of the monasteries. But

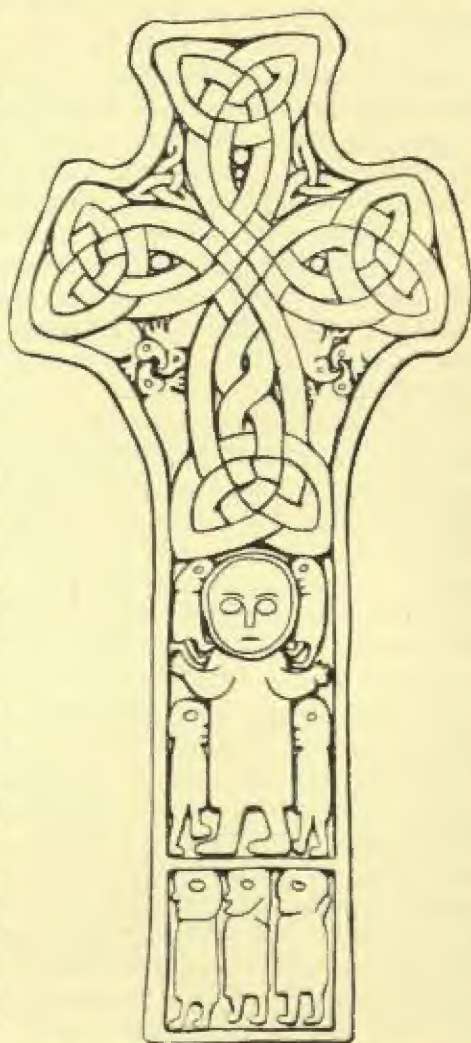


Fig. 6. Cross at Cardonagh, after F. Henry.

¹ F. Henry, *Irish Art*, pp. 50, 57.

² *Ibid.*, 58; and F. Henry, *J.R.S.A.I.*, lxxvii. pl. XXXI, fig. 1.

³ F. Henry, *op. cit.*, pl. XXIV, fig. 1.

⁴ F. Henry, *op. cit.*, pl. XVII.

⁵ *Ibid.*, pl. 21.

⁶ F. Henry, *La Sculpture irlandaise*, pl. XII.

⁷ F. Henry, *op. cit.*, pls. XIV and XV.

in addition to the new iconography there is also a change in the form of the slab, which from a roughly dressed slab or pillar became a carefully shaped monument, sometimes rectangular, sometimes with a rounded or pedimented top, often with projections at the top or sides. There seems to be here a possible connection with contemporary Coptic funerary slabs (Pl. XXIII, *b*), which are somewhat similar in conception, with a decorative cross and figurative scenes and often a rounded or pedimented top.

In the west of Scotland there are a number of monuments closely related to these late seventh-century Irish slabs and crosses.

At Riskbuie,¹ Colonsay, there is a complicated pillar which reveals in its elements a crucifixion, a free-standing cross (with the arms barely emerging from the sides of the slab as at Cardonagh), the *ixθvs*, and also a cross with a stem. It is a good illustration of the complexity of ideas in the mind of a primitive artist. At Kilmartin,² Argyllshire, there is a free-standing cross with almost the same decoration as occurs on one of the Cardonagh pillars. The arms of the cross are very short. At the base of the shaft on one side there is carved a small cross with four crosslets between the arms.

The free-standing cross did not spread to Pictish territory, but there are two examples in Shetland of elaborate cross-slabs of a purely Irish type, at Bressay³ and at Papil⁴ (Pl. XXIV, *a*). The Bressay slab is nearly 4 feet high; that of Papil 7 feet. Both monuments have the compass-drawn cross in a circle so common on earlier slabs, and on both it is ornamented with the type of ribbon interlacing found in the Book of Durrow, and closely recalls a similar cross on a page of these Gospels (Pl. XXIV, *b*). On each slab there is carved a lion similar to the lion of St Mark of the Book of Durrow; on the Papil stone it is the same strange beast with small ears, protruding tongue, long curling tail and sharp claws, and the inner decorative line, but on the Bressay stone it appears in a very simplified form. Both beasts are derived, if not from the Book of Durrow itself, then from some similar source, by an artist who had no conception of what a real lion looked like. On the Bressay stone there are two animals *affrontés* of the same type as on the Ferbane slab in Ireland. The iconography of both monuments is very limited. Legends from the lives of the Egyptian monks, St Paul and St Anthony, provide some of the most popular themes on cross-slabs in Ireland and in Scotland. At Papil there appears to be a representation of the temptation of St Anthony by women, disguised as birds, who whisper in his ear:⁵ a human head is shown between two creatures with the beaks and legs of birds. The legend of Jonah and the

¹ *E.C.M.S.*, p. 396, fig. 413.

² *Ibid.*, p. 5, fig. 4.

³ *Ibid.*, p. 394, fig. 411.

⁴ *Ibid.*, p. 10, fig. 6.

⁵ See A. Kingsley Porter, "An Egyptian Legend in Ireland," *Marburger Jahrbuch für Kunstwissenschaft*, v. pp. 12-14.

Whale was another popular theme¹ (fig. 7). A different version from that on the Cardonagh pillar is given on the Bressay slab, for instead of the fish there is a monster,² and the swallowing and disgorging are shown in one scene by a human form extended between the mouths of two monsters that outline the top of the slab. On both monuments there are figures of monks with cowl, staff, and satchel, advancing towards one another.

The similarity to the style of the Book of Durrow in the flat ribbon interlacing (which existed only for a short time in Irish art³), the type of the lion, the decorated compass-drawn cross, as well as the flat style



Fig. 7. Temptation of St Anthony and Deliverance of Jonah.

a, Cross of Moone. b, Kettins. c, Papil.
d, Dunfallandy. e, Bressay. f, Dunfallandy.

of carving and the broad figures, closely recalling the technique of the Cardonagh cross and slab, make it probable that these two monuments in Shetland can be dated to the late seventh century. An objection to this dating can be found in the ogham inscription on the Bressay stone, in which the Norse word "dattr" occurs. This led Doctor Joseph Anderson to date the slab as late as the ninth century. In the opinion of Professor Macalister, however, the inscription may be considerably earlier than this. That an infiltration of Norsemen into Shetland and Orkney had begun long before the Viking immigration seems now to be generally accepted.⁴

The only cross-slab of a developed type in the west of Scotland is at

¹ It was a widespread motive in early Christian art. See Cabrol et Leclercq, *Dictionnaire d'Archéologie chrétienne et de Liturgie*, Paris, 1907-31.

² "Monster" was the word used in the account of Jonah in the "Old Latin Version," the translation of the Bible thought to have been brought to Ireland by St Patrick; in the Vulgate, in use in Northumbria by 700, St Jerome used the word "fish."

³ See F. Henry, *Irish Art*, p. 50.

⁴ See H. Shetelig, *Viking Antiquities of Great Britain and Ireland*, Oslo, 1935, pp. 6-9.

Ardechattan,¹ in Argyllshire (Pl. XXV), and belongs stylistically to this group. It is 6½ feet in height and sculptured only on one face. The cross has rounded angles at the junction of the arms, and a ring joining them, on which is carved the fret pattern shown on the cross on a page of the Book of Durrow (Pl. XXIV, *b*). On the upper arm of the cross there is the figure of a man with elaborately curled hair; he is holding a book, and his legs merge into interlacing. The rest of the cross is decorated with patterns of spiral, interlacing, and diagonal key pattern. One side of the slab is missing, but the panels forming the background to the cross on the side that remains are filled with strange animals and a vertical row of three ecclesiastics with cowls drawn over their heads, one playing a harp, another pipes, and the third holding what appears to be a crown. Below these is the figure of a warrior holding a spear and a rectangular, notched shield.² Although the broad ribbon interlacing, and the flat, rather heavy style of carving should date this slab to the late seventh century, there are several features which indicate a later date; the human figure merging into interlacing is found in Irish manuscripts of the eighth century, and the whole slab bears a general resemblance to the post-Viking monuments of the Isle of Man.

PICTISH CROSS-SLABS.

We have seen how, stage by stage, the development of the cross-slab in Ireland has been paralleled by examples in Scotland. Now, from early in the eighth century, the Christian monuments in Pictish Scotland developed into a national type along lines independent of Ireland. This type, as was mentioned at the beginning of this paper, is formed fundamentally from the merging of the art of the Pictish symbol stones with that of the Irish Christian monuments. The form of the monument, the Christian iconography, the majority of the decorative motives, came from Ireland, but they were gradually interpreted in a new way, and, in addition, the Pictish gift for animal art found expression in an elaboration of hunting scenes and imaginary animals. The Pictish symbols themselves were retained and were an important decorative feature. New themes and decorative motives arrived from abroad and were adapted to suit the Scottish monument. Ireland ceased to be the only outside source of inspiration, and Scotland's other neighbour, Northumbria, became an important influence.

Northumbrian art was a curious mixture—in part developed from the decorative art of Ireland, in part from the naturalistic art of the Mediterranean. This was due to the position of Northumbria as the meeting-point of the Roman and Celtic Churches. After the conversion

¹ *E.C.M.S.*, p. 377, fig. 393.

² Possibly connected with the figure of David the Warrior on the sarcophagus at St Andrews, see fig. 14.

a

b

c



[After Leeds.]

[Phot. F.H.]



d



e

a and *c*, Hanging bowl escutcheons.

b, Handpin, Dublin Museum.

d, Bronze plaque from Torslunda, Stockholm Museum. (Nat. size.)

e, Bronze helmet from Deskford, Edinburgh Museum. (1.)

CECIL L. CURLE,

[To face page 80.



Meigle, Perthshire (front), 8 feet high.

CECIL L. CURLE.





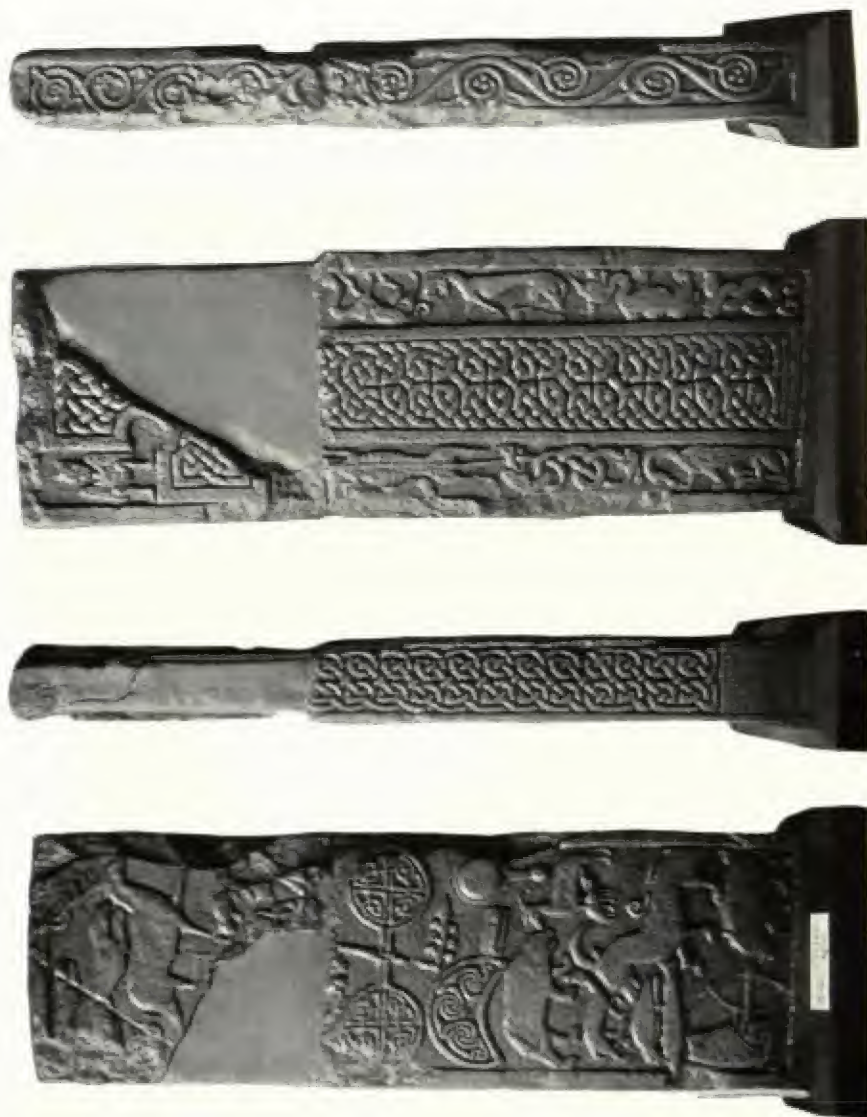
Rossie Priory, Perthshire, 5½ feet high.

Cecil L. Curle.



Aberlennno, Angus, 7½ feet high.

[Photos O. G. S. Crawford.



St Vigean, Angus, 54 feet high.

From a cast in the National Museum of Antiquities, Edinburgh.



Meigle, No. 5, 2½ feet high.



a



b



c

a and *b*, Inchbrayock, Perthshire, 2½ feet high; *c*, Meikle, No. 6, Perthshire, 1½ feet high.

CECIL L. CURLE.



Meigle, No. 26, Perthshire, 5 feet long.



Meigle, Perthshire. *a* and *b*, Slab No. 11, 5½ feet long; *c* and *d*, Top and end of slab No. 20.
CECIL L. CURLE.



Dyce, Aberdeenshire, 4½ feet high.

CECIL I. CURLE.



Keills, Argyllshire, 7½ feet high.



a



b



c

a and b, Sarcophagus at St Andrews; c, Coptic carved chest, Cairo Museum.



Nigg, Ross-shire, 7½ feet high.

CECIL L. CURLE.



Hilton of Cadboll, Ross-shire, 7½ feet high.



Rosemarkie, Ross-shire, 8½ feet high.

CECIL L. CURLE.

of the Picts the next great missionary enterprise from Iona had been to Northumbria, when, in 635, Aidan, sent from Iona at the request of King Oswald, had established his monastery and see on the little island of Lindisfarne, off the coast of Northumbria.¹ In spite of contact with the south of England, which had been Christian since the establishment of St Augustine's see at Canterbury in 597, Northumbria followed the usage of the Celtic Church for a number of years, but, after a long controversy, which terminated at the Synod of Whitby in 664, the Scottish party was defeated, and Northumbria accepted the Roman usage.² Colman, Abbot of Lindisfarne, left with his party, consisting of the Irish monks and some of the English, first for Iona and then for Ireland.³ Aidan had brought with him Irish monks and Irish art, and Lindisfarne remained in spirit an Irish monastery long after the departure of Colman. The Lindisfarne Gospels, dated to about 700, are almost purely Irish. But, in addition to Irish art, Northumbria was familiar, even before the Synod of Whitby, with Mediterranean art. The Irish artistic tradition is disclosed for the most part in manuscripts, the Mediterranean in stone-work, on the carved high crosses which are found all over Northumbria.

There was considerable contact between the Northumbrian Church and the Church in Pictish Scotland. Bede tells how, in 681, Archbishop Theodore of York added two more to the three bishoprics already existing in Northumbria. One of these was at Candida Casa, "the number of the faithful having increased"; the other was "in the province of the Picts who at that time were subject to the English," under Bishop Trumwine. Although his diocese appears to have been in Pictish territory, and he had been "made Bishop over them," his headquarters were the monastery of Ebbereurnig (Abercorn), which was "seated in the country of the English, but close by the arm of the sea which parts the English and the Picts."⁴ In 685 King Eadfrid, "rashly leading his army to ravage the province of the Picts," was defeated and slain. The Picts recovered their own lands, "which had been held by the English and the Scots that were in Britain." Trumwine and his people withdrew and took refuge in one of the monasteries of the south.⁵ By 710 the Pictish king Nechtan had accepted the Roman observance of Easter and wrote to Ceolfrid, Abbot of Wearmouth and Jarrow, asking him for a letter of exhortation "by the help of which he might the better confute those that presumed to keep Easter out of due time; as also the manner and form of tonsure whereby the clergy should be distinguished . . . he also prayed to have master builders sent him to build a church of stone in his nation

¹ Bede, *Hist. Eccles.*, iii. c. 3.

² Bede, *op. cit.*, iii. c. 25.

³ Bede, *op. cit.*, iii. c. 26.

⁴ Bede, *op. cit.*, iv. c. 26. In all the original versions of Bede the passage is given as "sed in vicinia freti quod Anglorum terras Pictorumque determinat." In the translation of Mr Stevens, edited by the Rev. J. A. Giles, London, 1840, the translation of this passage is erroneous, giving *Scots* instead of *Picts*.

⁵ Bede, *op. cit.*, iv. c. 28.

after the Roman manner, promising to dedicate the same in honour of the blessed chief of the Apostles."¹ A lengthy reply was sent, thought to have been written by Bede himself, and he tells us that the nation "thus reformed, rejoiced, as being newly put under the guidance of Peter, the most blessed chief of the apostles, and committed to his protection."² Though Bede, in his eagerness that all should enter the Roman fold, may have taken an exaggerated view of the acceptance of the Roman usage by the whole Pictish nation, there is no reason to suppose that he deliberately distorts the facts. Summing up the political situation in 731, he states that "the Pictish people are at this time also at peace with the English nation."³ There were English monasteries at Candida Casa, Melrose, Abercorn. Northumbrian crosses are found in all these districts, but except for a few ornamental motives, the monumental art of Northumbria had little effect on the development of the cross-slab in Scotland, which was chiefly influenced by the Irish-Northumbrian manuscript style.

EARLY GROUP OF EASTERN CROSS-SLABS.

A first group of cross-slabs in Pictish territory shows a strong Irish influence. They have the same flat, broad, rather clumsy figure carving as have the Irish monuments of the late seventh century. The interlacing, however, has developed, from the simple ribbon interlacing found in the Book of Durrow, into the extraordinarily intricate thread interlacing which is a characteristic feature of the Scottish slabs. It is not only a great deal more intricate than the earlier type, but the scale is much smaller, and this change from a large scale to a small one is a typical feature of the alteration in style between the period of the Book of Durrow towards the end of the seventh century and that of the Lindisfarne Gospels at the beginning of the eighth century. The cross has become a much more important feature and is almost a structural part of the monument, and the arms of the cross are generally joined by a ring in the usual style of the eighth-century crosses in Ireland.

Probably one of the earliest monuments of this group is at Glamis,⁴ in Angus (Pl. XXVI). It is a massive, roughly-shaped slab of rock, nearly 9 feet in height, with a pedimented top. One side is bare of decoration, except for three Pictish symbols—the serpent, fish, and mirror—which are engraved in the centre. It is quite possible that the monument had first been a "symbol stone" and that later the top and other face were roughly dressed to receive the Christian carvings. On the carved side there is a large cross with rounded angles at the junction of the arms, which are joined by a circle, indicated by lightly incised lines. The interlacing

¹ Bede, *op. cit.*, v. c. 21.

² Bede, *op. cit.*, v. c. 23.

³ Bede, *op. cit.*, v. c. 21.

⁴ *E.C.M.S.*, p. 221.

on the shaft and circular centre of the cross is very elaborate, while that on the arms is formed by the elongated bodies of serpents with small heads and long beaks in which they grasp their fish-like tails. The top of the slab is outlined by the bodies of two monsters, and, although the carving is sadly defaced, there appears to be a human head between their jaws. In the upper panels behind the cross there is on one side an animal of the same type and in the same attitude as the animals *affrontés* of the Ferbane slab; on the other side is a hippocentaur, carrying two axes, and almost identical with a similar figure on the pillar at Tybroughney,¹ in Ireland. In one of the lower panels are two Pictish symbols—the deer's head surmounting a triple ring. In the other is a curious scene representing a human sacrifice: two men in tunics, with cowls, appear to threaten one another with axes, while above them is a cauldron out of which emerge human legs. This might be taken to represent a Christian martyrdom, but its resemblance to a scene on the Gundestrup Cauldron² (fig. 8) makes a pagan origin more probable.



Fig. 8. Human Sacrifice on Gundestrup Cauldron.

Cross-slabs at Fowlis Wester³ (Pl. XXVII, *b*) and at St Vigean⁴ (Pl. XXVII, *a*) are carved on one side only. Both show the shaft of the cross rising from a rectangular base, and on both the carving is intricate and delicate and in very low relief. Part of the slab at St Vigean has been destroyed, but most of the cross remains except the upper portion. It has rounded angles at the junction of the arms, but no ring joining them. The decoration on the cross consists of key pattern on the arms, rather angular interlacing on the upper part of the shaft and on the base, and, on the lower part of the shaft, a symmetrical pattern formed of eight spirals, four of which terminate in birds' heads, either biting one another's necks, or else with the beaks meeting at a small disc at the centre. The latter is quite a common Celtic pattern and is found, for example, on the Cardonagh cross and in the Rome Gospels.⁵ The other four spirals terminate in the bearded heads of men, with noses touching. The iconography of the figure scenes in the panels on either side of the cross is more varied than is usual in Scotland. The only theme of which the derivation is clear is that of St Paul and St Anthony parting the bread. The two saints are shown seated on chairs facing one another, with long tunics and short boots with pointed toes. This version of the story of their meeting is taken from St Jerome's life

¹ F. Henry, *La Sculpture irlandaise*, p. 42 and pl. XVIII.

² See Hubert, *The Rise of the Celts*, p. 124; Brøndsted, *Danmarks Oldtid*, iii. pp. 88-96; cf. *P.S.A.S.*, lxiii. pp. 196-213.

³ *P.S.A.S.*, lxvi. p. 409, fig. 1.

⁴ *E.C.M.S.*, p. 268, fig. 278.

⁵ Vatican Barb. lat. 570. Folios 18a and 125, dated to the end of the eighth century.

of St Paul, written at the end of the fourth century, which tells how a raven having brought them a loaf of bread, they disputed who should be the first to take a share, each wishing to give preference to the other, until finally each took hold of the loaf and they pulled it apart ¹ (fig. 9, *b*). In a similar version of the scene in Ireland, on the crosses of Moone ² (fig. 9, *a*) and Armagh,³ the raven is shown above the two saints. On the slab at St Vigeans there may originally have been a bird too, but the portion of the slab just above the figures is missing. In the lower part of the same panel there is carved a curious scene where a little naked man is shown crouching below the figure of a cow, or ox, apparently about to thrust a dagger into its throat. In the panel on the other side there are four marching figures of ecclesiastics, with cowls and long fringed tunics.

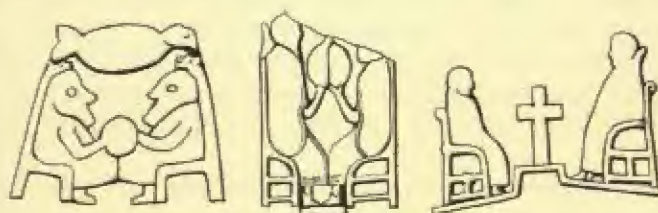


Fig. 9. Meeting of St Paul and St Anthony.

a, Cross of Moone.

b, St Vigeans.

c, Dunfallandy.

Between the two upper figures is the half-naked body of a man, suspended upside down with his head resting on a block or cauldron. No explanation has been found for these two scenes; possibly both may represent a sacrifice. The cross on the slab at Fowlis Wester has square, instead of the usual rounded, angles at the junction of the arms, and the ring joining the arms is very prominent. The interlacing and spiral pattern on the cross is very finely executed. In the upper panels there are, on one side, a realistic scene of Jonah and the monster; on the other, a sea monster associated with a sword and circular shield. On either side of the shaft are two seated figures of ecclesiastics. Behind one chair is the figure of an angel; behind the other a flowering tree. In front of one of the ecclesiastics is a flowering rod. This is evidently a simplified version of the theme of St Paul and St Anthony, as represented on the St Vigeans slab and the cross at Moone. It occurs in this form on one other slab in Scotland, that of Dunfallandy (fig. 9, *c*), which is described later in this paper, and on a cross-slab from the Isle of Man.⁴ Below this scene are two more ecclesiastics walking towards the cross, as on the Papil stone, but the

¹ See H. Waddell, *Desert Fathers*, p. 49.

² F. Henry, *La Sculpture irlandaise*, p. 146, fig. 109a.

³ F. Henry, *op. cit.*, p. 152, fig. 119.

⁴ At Kirk Maughold. See *E.C.M.S.*, p. 10, fig. 5.

corresponding figures on the opposite side of the shaft are missing. The tunics of the four figures, as well as the sides of the chairs, are elaborately carved with key pattern. A curious feature of this monument is that the original block of stone had only been roughly dressed so that, in spite of the delicacy and precision of the carving, it was executed on an uneven surface.

The carving on the cross-slab at Golspie,¹ in Sutherland (Pl. XXVIII), recalls in technique the monument at Glamis, where some of the motives are carved in light relief and others are incised. There are no figures on the side which bears the cross, nothing but ornamental motives, consisting of interlacing (part of it formed of snakes with fishes' tails, as at Glamis), and patterns composed of spirals or fret patterns. The other side, however, is covered with a profusion of Pictish symbols, no less than five, and in the centre a scene where a bearded man in a short tunic, bearing a dagger in one hand and a strange weapon, possibly an axe, in the other, is shown threatening a wolf-like beast, somewhat resembling the lion of the Book of Durrow (fig. 10). An ogham inscription runs up the edge of the right side of the slab and across the top, and the actual edge of the monument is carved with a "running spiral" in fairly deep relief.



Fig. 10. Detail of Golspie Cross-slab.

Still another cross-slab belonging stylistically to this group is at St Madoes,² in Perthshire. It is carved in a rather clumsy style which gives it what is probably a falsely archaic appearance. It has the usual cross on one side with the arms joined by a ring; there is a square panel at the centre with raised bosses. The top of the slab is outlined by the crouching forms of two beasts. In the upper two panels are two beasts with heads turned back. In the lower panels on either side of the shaft of the cross are a pair of animals with elongated bodies, biting one another, which appear to be a rough attempt at the strip form of animal interlacing of the Book of Durrow (fig. 11, a). The back of the slab has six panels, in three of which are single horsemen, with cowls and cloaks, and in the other three Pictish symbols.

MAIN GROUP.

In spite of their composite origin and the variety of sources that influenced their development, the Pictish cross-slabs gradually evolved into a remarkably constant type. The Irish influence declined as the influence from Northumbria increased, and the Pictish genius for animal

¹ *E.C.M.S.*, p. 48, fig. 48; for the inscription see Macalister, *loc. cit.*, pp. 206-208.

² *E.C.M.S.*, p. 292, fig. 309.

art became a dominating feature. The Christian iconography introduced was never very varied and became more and more limited. The foreign motives became absorbed in a strongly individual style.

The two sides of the monument were differentiated. One side was devoted to the cross. It is usually of the type, already described in the early group of eastern cross-slabs, with a ring connecting the arms, and sometimes it has a base; occasionally it is framed in a decorative border as in a page of manuscript. It is always, although the dominant feature of the monument, essentially decorative; the whole of the cross being carved with intricate designs of interlacing, spirals, or key pattern. In the panels forming the background to the cross there are carvings of fantastic animals, ornamental motives, Pictish symbols, and occasionally figures with a symbolic meaning. The other side of the monument is generally treated as a whole and not divided into panels. The plain surface is covered with an asymmetrical assortment of strange animals, horsemen, scenes of Christian iconography, and Pictish symbols. The spatial arrangement is curious. There is no background in the sense of landscape or vegetation. There is sometimes a feeling towards narrative art, but the figures may be grouped vertically as well as horizontally. As a rule they are all on the same plane although in a few cases three horsemen may be shown one behind the other. The artist seems to have attached little importance to scale; on the same panel one horse may be twice the size of another. The carving is in low relief on a flat background.

A remarkable feature of the cross-slabs is the animal art. This falls into two categories: the imaginary and the realistic. There are a variety of imaginary types of animal. One, developed from the beaked animal type of the Book of Durrow and the Lindisfarne Gospels, has already appeared in a rather different form in the Pictish "fantastic animal" symbol; on the cross-slab it is generally closer to the animal of the Lindisfarne Gospels and is shown with the elongated body, the inner spiral at the joint, and the feathered feet; it may be with or without the lappet (fig. 5). The majority of the other imaginary animals seem to be original to the cross-slabs, and they are nearly all characterised by the same curious feature: the foot is formed of a rounded, bulb-like heel attached to a single, curved, pointed toe or claw, with occasionally a pronounced dew claw above the heel. This is found on the most diverse types: on wolf-like creatures as at Forteviot,¹ on animals with long serpentine necks and long legs as at Meigle² and Woodwray,³ on a monster with large goggling eyes and a parrot's beak as at Meigle⁴ (Pl. XXXVIII, *a*), on creatures with short snouts, elongated bodies, and tiny forelegs as at Aberlemno⁵ (Pl. XXXIII), and on a pair of interlaced animals of the Lindis-

¹ *E.C.M.S.*, fig. 335, *c*.

² *Ibid.*, fig. 313, *a*.

³ *Ibid.*, fig. 258, *a*.

⁴ *Ibid.*, fig. 345, *b*.

⁵ *Ibid.*, fig. 227, *a*.

farne type on the same monument. Even a naturalistic representation of a stag at Dunfallandy ¹ has the same strange feet. The tails of these animals sometimes form a maze of interlacing as at Meikle ² (Pl. XXXVIII, a); sometimes they turn into animal heads as on a slab from Gask ³ and a monument at Meikle (Pl. XXXVII). With the exception of the last feature, which was common in Scythian art, was an Oriental feature in classical art, and is found in Christian sculptures in Lombardy,⁴ this series of animals appears to be a purely local development. They certainly do not appear anywhere else in the British Isles. Quadrupeds with human heads, such as are found on slabs from Gask ³ and Rossie Priory ⁵ (Pl. XXXII), show a southern influence. This type occurs in the Cuthbert Evangelist ⁶ and other manuscripts in England.

The naturalistic animal art is equally virile; horses, hounds, and other animals, such as the boar and bear, are carefully portrayed. There are two types of horses: one is small and lightly built, with sloping quarters and tail set low; it has a very high action and is schooled to carry the head very high. The other type is an equally small but heavier animal, with a big, clumsy head, and strong, high quarters. There are also two types of dog: a hound of the greyhound type, and a small dog like a terrier. The majority of the animals are, as on the engraved Pictish stones, natural to Scotland, such as would be familiar to the artist. Human figures, except for horsemen, are rarely represented. Always, both humans and animals, when treated naturalistically, are shown in profile.

There are Pictish symbols on the majority of the cross-slabs of this group. They are essentially the same symbols as on the symbol stones, and the "fantastic animal," the crescent and rod, the double disc and rod, and the mirror and comb are still the most popular. They are sometimes incised, but more often carved in low relief in the same style as the rest of the monument. The "running spiral" is a frequent decoration of the interior of the symbol, and designs from seventh-century metalwork are still in use (Pl. XXIX).

As well as the tall cross-slabs, there are also in this group a number of smaller cross-slabs, varying in height from about 2 to 3½ feet, and in addition there are two other types of monument: a recumbent monument and a rectangular slab carved only on one side, which from the style of decoration must be contemporary with the tall cross-slabs.

¹ *E.C.M.S.*, fig. 305, a.

² *Ibid.*, fig. 345, b.

³ *Ibid.*, fig. 307, a.

⁴ See G. T. Rivoira, *Origine della Architettura Lombarda*, Milan, 1908, p. 286.

⁵ *E.C.M.S.*, fig. 322, a.

⁶ Late eighth-century York or Mercian work. See Zimmermann, *Text*, p. 137.

TALL CROSS-SLABS.

Amongst the many tall cross-slabs of this group, four selected for description and illustration will give an idea of the variety and scope of the art.

One of the most important of the cross-slabs is at Meigle¹ (Pls. XXX and XXXI). The cross is unique and elaborate; it is equal armed, comprised within a circle with square-angled recesses at the junction of the arms. The surface is decorated with fret-work and interlacing, and a number of raised bosses give the impression that they are derived from large circular-headed nails. The ring forms the outline of the top of the slab. A very



Fig. 11.

a, St Madoes.

b, Meigle.

wide shaft has been added to the cross, below the ring, with spiral attachments at each of the four corners. This shaft is divided into three panels, in each of which there are a pair of animals *affrontés*. They are derived from the Irish type, such as is found at Papil and at Bressay, but they are in the later style of the east of Scotland, less simplified, more fantastic. In the deeply-recessed panels on either side of the shaft, animals with bodies coiled into a loop form a vertical strip pattern somewhat similar to that described at St Madoes, but in a more developed form, on the right of the shaft (fig. 11); on the left the carving is too defaced to be

intelligible, but there appear to be human forms climbing upwards. The other side of the slab, with its naturalistic, narrative art, is a typical example of this group. There are four scenes, only separated from one another by the grouping of the figures. At the top are five horsemen, three of them abreast, moving briskly in the same direction. The men are bearded and carry spears; they do not appear to have stirrups, and two of them have square saddle-cloths. Beside the topmost horseman are the rather squat figure of a four-winged angel and two hounds. This scene might be taken to represent a hunt, but there is also the possibility that it is derived from the story of the three Magi. Next, in the central position on the slab, is a group representing Daniel and the Lions. The prophet is shown clad in a long tunic, with arms outstretched, and surrounded by four lions. This theme belongs to the same cycle of illustrations as does that of Jonah. It is widespread in early Christian art; examples have been found at El-Bagawat, in Egypt,² on the sarcophagi

¹ *E.C.M.S.*, p. 207.

² See Cabrol et Leclercq, *Dictionnaire d'Archéologie chrétienne et de Liturgie*.

of Rome and Arles,¹ on the engraved glass cups from Podgoritzza.² It is one of the rather limited set of themes found on the Irish monuments of the seventh century.³ The antithetical grouping of the lions round the figure of Daniel recalls the standardised "hero dompting lion" group popular in the Orient from 3000 B.C. This grouping was retained in Western art, but it is surprising to find in Scotland such a close stylistic resemblance to an Eastern version of the scene as the group at Meigle presents, and although the theme was probably introduced into Scotland by way of Ireland, an Eastern prototype in this case seems probable. Such a source might have been a portable object, such as the piece of Coptic cloth woven with this theme, which is preserved at the cathedral of Sens. Immediately below this scene is the figure of a hippocentaur, carrying two axes, and with the branch of a tree under its arm. This curious motive is found on Anglo-Saxon sceattas.⁴ The fourth group at the base of the slab is too defaced to be intelligible, but there appear to be a human form, and two animals fighting. Projections, one at the top and a pair on either side, an unusual feature on a monument in Scotland, recall the Irish cross-slabs of the late seventh century.

The hunting scene described above is found on another slab at Meigle,⁵ but the angel associated with it has wings standing out at right angles to the body rather like an Assyrian sun god.

Elements of the same scene occur also on a cross-slab at Rossie Priory⁶ (Pl. XXXII), but they have become disintegrated; two horsemen appear in the two recessed panels on the shaft of the cross, two other horsemen and a pair of hounds are in a panel to one side, while the figure of the angel, with folded wings, is in one of the panels above the arms of the cross. In the corresponding panel there is a human figure holding, in either hand, a bird by the neck. This motive occurs on one of the pillar figures from White Island, in Ireland, which can be dated to the eighth century by the large penannular brooch carved on the shoulder of one of the figures and by their analogy with certain bronze figures;⁷ it is also found on the Franks Casket, a whalebone box carved in Northumbria about 700 A.D.⁸

A cross-slab at Aberlemno⁹ is another important example of this group (Pl. XXXIII). It is more than 7 feet in height, with a pedimented top. The cross has the usual ring joining the arms; the recesses at the

¹ Le Blant, *Les Sarcophages chrétiens de la Gaule*, Paris, 1886, pl. XV.

² Le Blant, *Etude sur les Sarcophages chrétiens antiques de la Ville d'Arles*, Paris, 1888, p. xxviii, pl. XXXV.

³ F. Henry, *La Sculpture irlandaise*, p. 149 sqq., figs. 110 and 113.

⁴ Baldwin Brown, *Arts in Early England*, iii. p. 45. These may be so late as to show a Carolingian influence.

⁵ *Ibid.*, p. 306.

⁶ *E.C.M.S.*, p. 296, fig. 310, b.

⁷ F. Henry, *Irish Art*, p. 100 and pl. 36.

⁸ British Museum, *Anglo-Saxon Guide*, p. 97 sqq., and see T. D. Kendrick, *Anglo-Saxon Art*, pp. 122-125, pls. XLIV. and XLV.

⁹ *E.C.M.S.*, p. 209.

junction of the arms are rounded. At the centre there is a circular disc with a pattern of "running spirals" such as is found on hanging-bowl escutcheons (Pl. XXIX, *a*). The arms are decorated with fret pattern, and the shaft with very elaborate interlacing. In each of the panels above the arms there is a fantastic animal with turned-back head. In the panel on the left of the cross there is a vertical row of strange animals, with tiny forelegs, and heads with short snouts, their serpentine bodies each coiled into a loop as on the cross-slab at Meigle (Pl. XXX). In the corresponding panel on the other side of the shaft there is a Pictish version of the animal interlacing of the Lindisfarne Gospels, and below it two beautifully carved and classically treated hippocamps. The back of the slab is outlined by two very attenuated animal forms with dragon-like heads and snarling jaws. At the top there are engraved the Pictish symbols of the rectangle and rod and the triple disc. Below these symbols the whole side of the slab is treated as a single panel on which is depicted the most realistic scene which occurs on any slab in this group. It is a battle scene with horsemen and foot soldiers, armed with spears or swords, with circular shields and helmets. One of the horses is depicted galloping, a movement found on no other Pictish slab. The figure of the foot soldier attacked by a bird in the bottom right-hand corner gives the impression that the scene represents some actual or legendary incident. There is a general similarity of style and treatment to the Franks Casket, and the helmets of the soldiers have the same heavy nose guards. Both sides of the monument are good examples of the Pictish transformation of Northumbrian elements.

A cross-slab at Dunfallandy¹ also belongs to this group, although it shows more Irish influence than do the majority of the others. The cross has no ring joining the arms. It has a square centre and is decorated with interlacing, key pattern, spirals, and small raised bosses formed of spirals. The panels beside the cross are subdivided into smaller panels in which are carved a variety of the imaginary animals typical of the group, a realistic representation of Jonah and the monster (fig. 7, *d*), and two clumsily portrayed angels with double wings. On the other side there is a strange medley of motives consisting of Pictish symbols, St Paul and St Anthony seated on chairs on either side of a cross, and a cowled ecclesiastic on horseback. Some of the motives are incised, some carved in low relief. The whole of the slab is outlined by the creatures so often found on these slabs, with the heads of animals and the tails of fishes. In this case there is a human head between their extended tongues (fig. 7, *f*). This motive of a head between two beasts, which is so common in this group, seems to be a confusion of thought between the themes of the swallowing and disgorging of Jonah and the temptation of St Anthony, with possibly

¹ *E.C.M.S.*, p. 286, fig. 365, *a* and *b*.

some dim connection with the Celtic legend of the devouring animal god.¹

A cross-slab at St Vigeans ² (Pl. XXXIV) has a rather heavier, although not essentially different, style of carving to the monuments of this group which have been previously described. The cross is simple in form, decorated with regular interlacing outlined by a plain moulding; strange birds and animals and snakes filling the narrow panels on either side, with a small squatting demon in the left-hand top panel. On the pictorial side there are a realistic hunting scene with a stag and two hounds, several Pictish symbols, a varied assortment of animals including a bear, and a man in a cloak and tunic, shooting in a kneeling position with bow and arrow at a boar. The bow shows the loop to which the string is attached in the same way as on the Franks Casket. Down one side of the slab is carved a delicate strip of interlacing, with below it an inscription in Hiberno-Saxon semi-uncials.³ On the other edge of the slab there is a Northumbrian vine scroll pattern, a motive rarely found on the Pictish cross-slabs, derived from the version which is found on the cross shafts from Aberlady ⁴ and Abercorn.⁵

SMALL CROSS-SLABS.

The small cross-slabs follow, as a rule, the plan of the larger monuments, with a cross on one side and a figurative scene on the other.

Four of these monuments have only a single horseman on the pictorial side, in some cases accompanied by Pictish symbols.⁶ The most elaborate of these is at Meigle ⁷ (Pl. XXXV). The cross, which is very ornate, with part of the shaft turning into animal heads, is set in a frame of interlacing. The four deeply recessed panels on either side are filled with examples of the usual types of strange animals. On the back of the slab is a single horseman, carved in very low relief, and on one edge are incised two Pictish symbols. Another of these slabs at Meigle shows a horseman bearing a circular shield, above the Pictish symbol of the crescent, and

¹ See E. Espérandieu, *Recueil général des Bas-reliefs de la Gaule romaine*, Paris, 1907-15, I. p. 102.

² *E.C.M.S.*, p. 235.

³ Romilly Allen gives the reading for this inscription as

DROSTEN
IPUERET
ETTFOR
CUS.

Its meaning has never been satisfactorily determined. Cf. Macalister, *loc. cit.*, p. 195.

⁴ See O. G. S. Crawford, *Antiquity*, xl. (1937) pp. 469-473, for examples of the vine scroll on cross-slabs in Scotland.

⁵ *E.C.M.S.*, p. 418, fig. 435, d.

⁶ At Meigle, *E.C.M.S.*, p. 300, fig. 314, p. 299, fig. 312, and p. 301, fig. 315; and at Logierait, p. 291, fig. 308.

⁷ *E.C.M.S.*, p. 300, fig. 314.

a hound (Pl. XXXVI, c). The design of running spirals within the crescent closely resembles Late Celtic designs on metal-work (Pl. XXIX, b).

Other of these small cross-slabs show a hunting scene with horsemen and hounds pursuing a stag. Examples of these are at Scoonie,¹ in Fife, and at Inchbrayock,² in Angus.

The most curious of these monuments comes from Inchbrayock³ (now in the museum at Montrose) (Pl. XXXVI, a and b). The carving is clumsy and grotesque. The arms of the cross are decorated with an asymmetrical design of spirals (recalling Late Celtic metal-work). In the upper panels there are debased animal forms, and in the lower panels, on the one side a strange beast suckling its young, and on the other a representation which might conceivably be Delilah cutting off Samson's hair. On the upper part of the pictorial side a horseman and hound are shown pursuing a deer; there are some strangely elongated animal forms, and a pair of decorated discs. In the lower part there is a curious scene which is presumably meant to show Samson slaying a Philistine with the jawbone of an ass, while beside him crouches a female figure. This interpretation of the scene cannot be taken as certain, for it is not found elsewhere in Scotland nor in Ireland, and is not one of the usual scenes of early Christian art. The monument is obviously a freak one and not easy to date. The sword worn by Samson is, however, exactly of the type shown on a Swedish bronze plaque from Torslunda⁴ (Pl. XXIX, d), which is dated to the seventh century.

RECUMBENT MONUMENTS.

The recumbent monuments belonging to this group are rectangular blocks of stone, approximately 5 feet in length by 1½ feet wide and 1 foot high. From their shape it seems certain that they must be funerary monuments. Their distribution is limited, for they are only found in Perthshire and Angus.⁵

The most elaborate example is at Meigle⁶ (Pls. XXXVII and XXXVIII, c and d). It is carved on the top, at both sides, and at one end. The top is outlined by two serpentine bodies, terminating at one end in the heads of birds and at the other in animal heads which enclose in their jaws a socket, presumably for a small cross-slab.⁷ In the centre four triangular panels con-

¹ *E.C.M.S.*, p. 347, fig. 360.

² *Ibid.*, p. 255, fig. 265.

³ *Ibid.*, p. 223, fig. 235.

⁴ See Hjalmar Stolpe, *La Nécropole de Vendel*, Stockholm, 1927, p. 54.

⁵ In Perthshire at Meigle, *E.C.M.S.*, p. 339, fig. 343, a and b, p. 333, fig. 346; in Angus at Strathmartine, *E.C.M.S.*, p. 231, fig. 244; at St Vigean, *E.C.M.S.*, p. 269, fig. 279, and p. 273, fig. 285.

⁶ *E.C.M.S.*, p. 303.

⁷ Romilly Allen gives two examples from Angus of very small cross-slabs, only about 1 foot wide, with tenons projecting from the bottom (*E.C.M.S.*, p. 264, fig. 274, and p. 270, fig. 281). These may have been of the type which fitted into the sockets of the recumbent monuments. A slab at Alyth (*E.C.M.S.*, p. 287, fig. 304) is engraved with a cross with a tenon.

taining raised bosses form a rectangle. At one end there is a coiled serpent, and at the other two hippocamps appear to be dancing together. One of the sides of the monument has a hunting group consisting of five horsemen and two hounds at one end; a grid design in the centre; and two imaginary animals, one with a serpent entwined in its tail, at the other end. In the panel formed by the other side there is a horse or mule, shown with its legs doubled up to compress it into the narrow space available, then the prowling form of a bear; in the centre a swastika formed of four human bodies (a motive found on the market cross at Kells¹ (fig. 12)); and at the end an unusual version of the "devouring monster" showing two animals facing one another, one with a human leg protruding from its jaws, and with a human head above. The carved end of the monument shows the naked figure of a man fleeing from a monstrous bird.



Fig. 12. Human Swastika, Market Cross, Kells, after F. Henry.

Another elaborate recumbent monument is also at Meigle² (Pl. XXXVIII, *a* and *b*). It has two deeply recessed panels on either side filled with carvings. In the panel on one side there are a number of motives: the version of Jonah which is found on the cross-slab at Papil, where the body of a man is shown extended between the jaws of two monsters (in this case instead of outlining the slab in the usual way, the bodies of the monsters surround a circular design of raised bosses), a rectangular design of raised bosses, an unintelligible group of animals, and finally two imaginary animals with bodies entwined round one another. In the panel on the other side there is a spirited rendering of three horsemen, riding in single file, preceded by a dog, and followed by a strange little dancing figure.

RECTANGULAR SLABS.

Like the recumbent monuments the rectangular carved slabs are few in number and limited in distribution, for they have only been found in Perthshire.³ They are thin slabs, carved only on one side, and as there is no part which could have been sunk in the ground, they must have been presumably attached to the wall of a building.

One of these slabs, from Meigle⁴ (fig. 13), appears to have been carved by the same hand as the recumbent monument (Pl. XXXVII) described on page 92. In the centre of the slab there are two hippocentaurs dancing together; on one side of them a naked man is shown fleeing from a monster,

¹ F. Henry, *La Sculpture irlandaise*, p. 84, fig. 40, *d*. This is a late ninth-tenth century cross. The persistence of such motives is not unusual in Ireland.

² *E.C.M.S.*, p. 332.

³ *Ibid.*, at Murthly, p. 305; at Meigle, p. 331; at Dull, p. 315, fig. 320.

⁴ *Ibid.*, p. 305.

and on the other, two creatures with human bodies and the heads of beasts are fighting one another. These probably represent men wearing helmets in the form of animal masks, similar to those shown on a bronze plaque from Torslunda¹ (Pl. XXIX, *d*), and the helmet in the form of a boar's head from Deskford² (Pl. XXIX, *e*).

The fragment of another slab, now lost, from Meigle,³ showed three men in a cart, drawn by a pair of horses; an archer similar to the one on



Fig. 13. Slab at Murthly, Perthshire, after Romilly Allen.

the cross-slab at St Vigean's (Pl. XXXIV), and a huge beast devouring a man who is thrusting a dagger into its throat.

This main group is, as has been shown, remarkably coherent, and the origin of the cross-slab is clear: derived from the cross-bearing slabs of Ireland and Dalriada, and in style retaining much of the Pictish animal art and technique of the "symbol stones." But, except for the analogy of the decorative motives with dated objects in other countries, there is little evidence for the date of the monuments. Their essentially decorative character, to which the idea of sculpture in the round was entirely foreign, made it natural that the sources of influence would be chiefly those with surface decoration and therefore portable objects such as manuscripts,

¹ Hjalmar Stolpe, *La Nécropole de Vendel*.

² J. Anderson, *Scotland in Early Christian Times*, I. p. 117.

³ *E.C.M.S.*, p. 331, fig. 344.

carved objects of wood or bone, and metal-work, rather than monumental sculpture.

On the whole the style of the decoration of the cross-slabs is closer to that of the illuminated Irish manuscripts than to anything else, and many details resemble so closely motives found in the Lindisfarne Gospels that an approximate similarity of date seems probable. Such points which have already been noted on individual monuments are: the general style of interlacing, both in its intricacy and in the small scale on which it is executed, compared to the broader, simpler type of the Book of Durrow; the frequent appearance of the typical animal of the Gospels as an outline to the slab; the small strip of animal scroll at Aberlemno (see Pl. XXXIII) which might, except for the strange Pictish feet, almost have been taken direct from a page of the manuscript; and finally the way in which any animal, however fantastic, or however much it be contorted into interlacing, always retains its lifelike character, which is one of the characteristics of the animal style of Lindisfarne of the early eighth century, and remained a constant feature of Irish art up to the end of the ninth century.

Other contacts with eighth-century Northumbrian work are the vine scroll, which belongs essentially to the monumental art of Northumbria, and a general resemblance to the style of carving of the Franks Casket.

Contact with Ireland was evidently maintained; the human swastika on the recumbent monument at Meikle being one example of the introduction of a specific motive.

The parallels with the seventh-century Torslunda finds—the sword on the cross-slab from Inchbrayock and the animal-headed helmets on the slab from Meikle—raise an important question as to connections between Scotland and Scandinavia before the period of the Viking raids.

The Christian iconography is limited, with the exception of a few doubtful motives, to themes which are found on the series of Christian monuments in Ireland dated between about 650 and 750.¹

The dating of the main group of Pictish monuments on stylistic grounds seems to place them in the early eighth century, which accords with the historical contacts between Pictish Scotland and Northumbria summarised earlier in this paper.

NORTHERN CROSS-SLABS.

Except for a few examples the cross-slab of the main group is not found north of Angus. Farther to the north the older form of rough monument, with the cross carved on the surface of the slab and not forming a structural part of it, remained the usual type.

¹ See Henry, F. *La Sculpture irlandaise*, p. 134.

In Aberdeenshire there is a small group of such monuments, little more elaborate than roughly dressed boulders, on which are carved crosses, decorated with interlacing, and sometimes associated with Pictish symbols. An example of this group is at Dyce¹ (Pl. XXXIX), where the arms of the cross terminate in spirals. This type of spiral termination is found on slabs at Inishmurray,² in Ireland, and was common on the Continent. It is found, for example, on a slab at Narbonne,³ in the south of France, dated to the eighth century, and on a chancel panel from the Church of Santa Maria in Trastevere,⁴ in Rome, dated about 800. It may have been a common Eastern type; it is found in Armenia on slabs dated to the sixteenth century.⁵ Although this group of Aberdeenshire monuments belongs more to the type of the seventh-century slab, yet the elaboration of the interlacing, and this detail of the spirals, makes it more probable that they can be dated to the eighth century.

Other more elaborate monuments in the north are closer to the main group, but the cross, as in the Aberdeenshire group, is not in any way structural, nor is it framed in the slab, and the figure scenes consist of only one or two isolated themes. An example of such a monument is at Fordoun,⁶ in Kincardineshire. The carving on this cross-slab is delicate, partly incised, partly in low relief. The cross takes up only a part of the slab; horsemen, accompanied by hounds, are shown, two on either side of it and one on the shaft. The Pictish symbol of the double disc and rod, below the cross, is decorated with a design recalling the disc of a hanging-bowl escutcheon.⁷

IONA CROSSES.

Apart from the seventh-century monuments allied to the Cardonagh group there are very few examples of crosses or cross-slabs in the west of Scotland, with the exception of a group of elaborate free-standing crosses in the Iona district.

On the island of Iona only one cross remains intact, that of St Martin,⁸ but there are fragments of five or six others.⁹ They were tall crosses of the eighth-century Irish type, with a ring connecting the arms, and that of St Martin has curiously short arms. The iconography, which includes Daniel and the Lions, the Sacrifice of Abraham, etc., is purely Irish, with the exception of one motive, the Virgin and Child, which is never found in Ireland but was known in Northumbria. The decoration

¹ *E.C.M.S.*, p. 189.

² W. F. Wakeman, *A Survey of the Antiquarian Remains on the Island of Inishmurray*, figs. 46 and 47.

³ J. Baum, *La Sculpture figurale en Europe à l'Époque Mérovingienne*, Paris, 1937, pl. LXXII.

⁴ J. Baum, *op. cit.*, pl. LXXXIV.

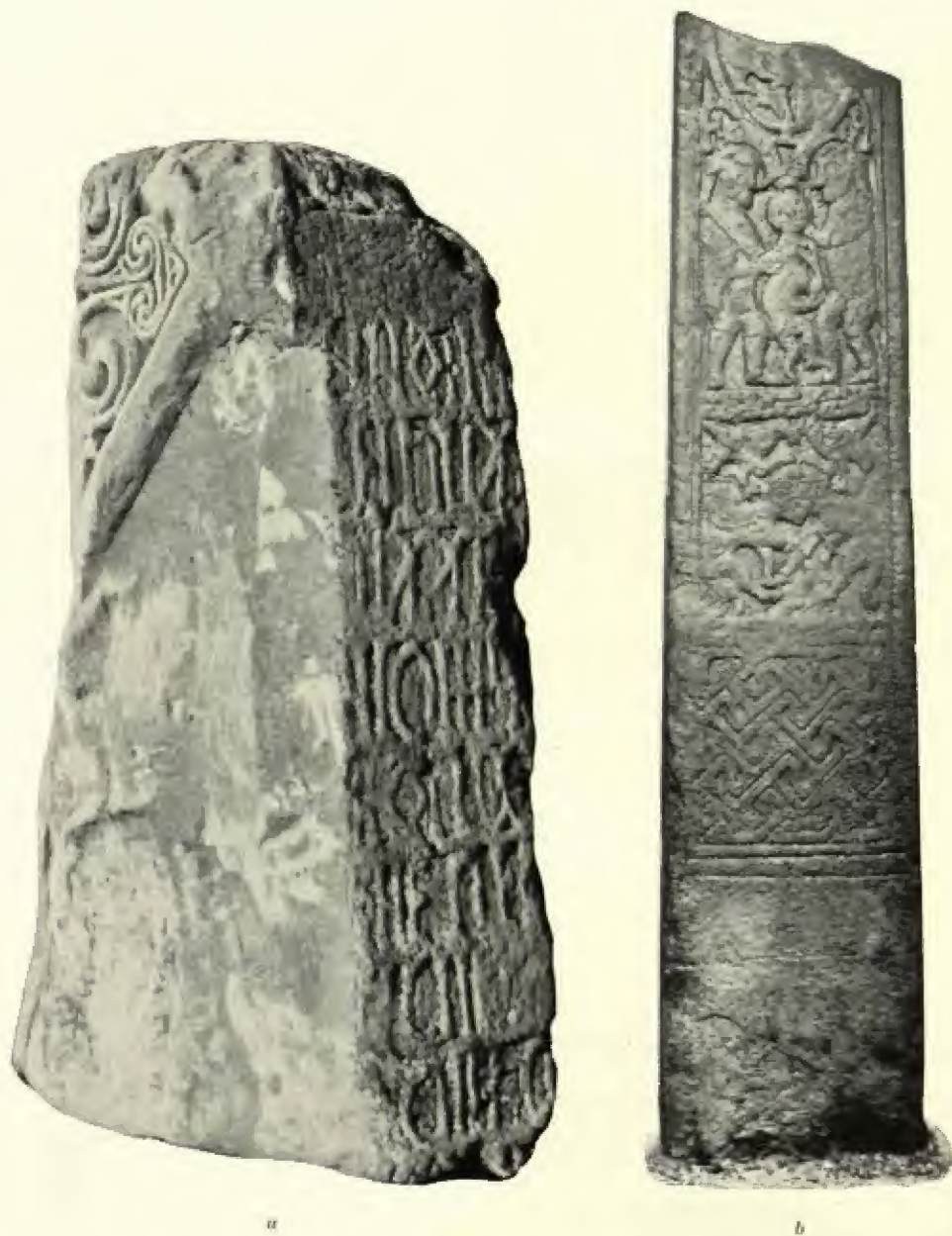
⁵ See Jurgis Baltrušaitis, *Études sur l'Art médiéval en Georgie et en Arménie*, Paris, 1929.

⁶ *E.C.M.S.*, p. 201, fig. 217.

⁷ F. Henry, *J.R.S.A.I.*, lxx. fig. 3.

⁸ *E.C.M.S.*, p. 381, fig. 397, a and b.

⁹ *Ibid.*, pp. 381-393.



a, Tarbat, Ross-shire, 1½ feet high; *b*, St Andrews, Fife, 8 feet high.

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[To face page 96.



b



a



a, Kirriemuir, Angus, 2½ feet high; *b*, Brechin, Angus, 3½ feet high.



Kirriemuir, Angus, 2 feet high.



a

[After M. Boyle.



b

a, Benvie, Angus, 3 feet high; *b*, St Andrews, Fife.

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Invergowrie, Angus, 2½ feet high.

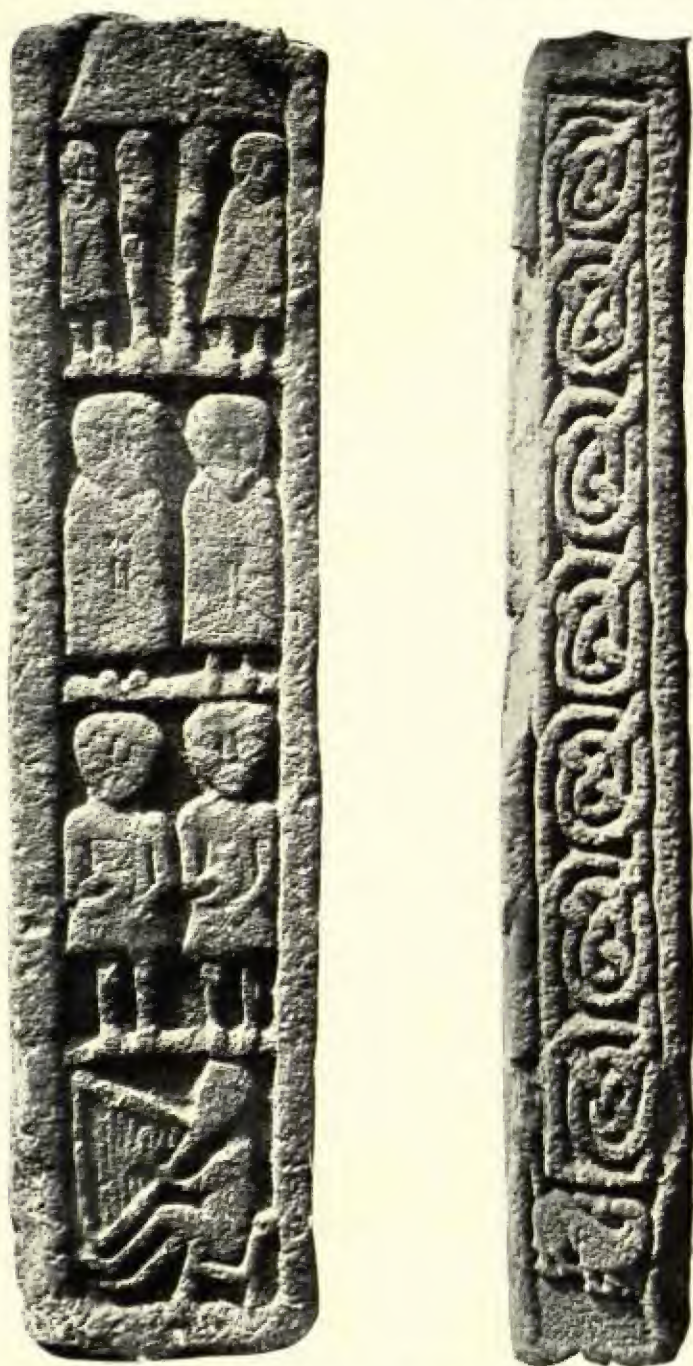


The "Corp Naomh" in the National Museum of Ireland.

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Portaviot, Perthshire, 6½ feet long.



Monifeth, Angus, 31 feet high.

CECIL L. CURLE.

of the crosses consists chiefly of panels filled with large raised bosses; some are of interlacing, some have a circular depression in the centre in which are three much smaller bosses; some are placed on a background of writhing snakes, others on a background filled with smaller bosses and raised spirals. Some panels of spirals are practically identical, both in composition and in the type of spiral, with parts of the Chi Rho page of the Book of Kells.¹ From their connection with the Irish crosses it seems probable that they belong to about the same period, when the community at Iona would be in touch, not only with Ireland, but with Northumbria and the east of Scotland. It is certain that they must have been erected sometime before 806, when the monks, fleeing from the Viking invasions, took refuge at Kells and there built a new monastery. There has been so much destruction and rebuilding at Iona that nothing but the fragments of these crosses, and a few grave slabs of the Clonmacnoise type,² which may be as early as the eighth century, remain of what must have been a centre of carving. There is a legend that there were once three hundred and sixty crosses on Iona³; two are known to have been called after St Matthew and St John.⁴

Traces of this school of carving exist elsewhere in the west. A cross on Islay⁵ resembles closely in its proportions crosses in Ireland. At Keills,⁶ in Knapdale, there is a cross of a similar type to those of Iona (Pl. XL), with the short arms of St Martin's cross, but without the ring joining them. A large raised boss, with three small bosses in a depression at the centre, occupies the centre of the arms. Above it there is the figure of an angel trampling on a serpent, below it the figure of Daniel, and around it the four lions. The shaft is decorated with a diagonal key pattern, two pairs of beasts on a background of interlacing, and at the base an elaborate spiral pattern in low relief.

ELABORATE EASTERN MONUMENTS.

The next series of monuments in the east of Scotland, while continuing the tradition of the main group of cross-slabs, show both a stylistic development and a sudden influx of new motives, bringing in a wider iconography. The Picts appear to have turned for inspiration from their native art of surface decoration and the models taken from manuscripts and metal-work which had satisfied them up to now, to monumental art and

¹ See F. Henry, *Irish Art*, p. 148. She considers the date of the Book of Kells to be between 760 and 820. It is probable that different painters went on working at it for a number of years. Part at least of the illumination must have been executed at Iona.

² *E.C.M.S.*, p. 390, fig. 405, and R. A. S. Macalister, *The Memorial Slabs of King's County*, Publication of the R.S.A.I., 1907-8.

³ Reeves, *St Columba*, p. cxxxvii.

⁴ Reeves, *op. cit.*, p. 419, and see F. Henry, *Irish Art*, p. 101. Apparently elaborate crosses dedicated to the Evangelists were frequently erected at the eighth-century Irish monasteries.

⁵ *E.C.M.S.*, p. 391, fig. 410.

⁶ *Ibid.*, p. 390.

sculpture in the round. There is a general elaboration of the whole monument and for the first time an attempt at portraying drapery on the figure carving. The flat style of carving has given way to a definite feeling of *ronde bosse*, and the elaborate raised bosses found on the crosses of Iona, and possibly coming to the east of Scotland from there, play an important part in the decoration of the monuments. The distribution of this new style is wide. There are three monuments in particular which appear to derive their figure scenes directly from a foreign source. These are: an altar tomb at St Andrews,¹ in Fife, a cross-slab at Nigg,² in Ross-shire, and a slab from Hilton of Cadboll,³ in the same county.

The altar tomb at St Andrews is incomplete (Pl. XLI). Originally there must have been four narrow, upright slabs, one for each corner, grooved vertically to receive the four thinner slabs which formed the sides of the box. The complete tomb would have measured 5 feet 9 inches long by 2 feet 11 inches wide by 2 feet 4 inches high. Two of the corner posts remain, and one long panel and one end panel are complete.

The long panel is divided into three compartments. The centre one contains chiefly representations of David with the lion, as a hunter, and as shepherd or warrior.⁴ In early Christian art David was used as a prefiguration of Christ, and David as a harpist is one of the themes found on seventh-century monuments in Ireland,⁵ but these scenes from the life of David are very different. He is here shown with the lion (that it is David and not Samson is made clear by the figure of the sheep in the background), in the traditional attitude of the Babylonian and Assyrian Gilgamesh, instead of in the Mithraic attitude which is usual in the West. He is dressed in flowing drapery, and the figure is evidently related to the classical figures of the fourth-century sarcophagi of Italy and southern France,⁶ which belong to the tradition of the Hellenistic bas-reliefs, but the elaborate folds and pleats of the costume with the ends forming a symmetrical scalloped edge seem nearer to the formalised drapery of Byzantine art. The sword, with the pattern of interlacing on its sheath, is an unusual feature to find on a classical figure. It is an Eastern type, closely resembling the sword attributed to Charlemagne in the Treasury of the former Imperial House of Austria at Vienna, and that on the Byzantine porphyry statues of emperors at Venice.⁷ The lion too is

¹ *E.C.M.S.*, p. 350; and see also Cecil Mowbray, "Eastern Influence on Carvings at St Andrews and Nigg, Scotland," *Antiquity*, 1936, viii, pp. 428-440.

² *E.C.M.S.*, p. 75; and see Cecil Mowbray, *loc. cit.*

³ *E.C.M.S.*, p. 61.

⁴ See Romilly Allen, *Early Christian Symbolism in Great Britain and Ireland before the Tenth Century*, London, 1887, pp. 203-208. R. Allen points out that there are two examples of David as poet or warrior in the Saxon Psalter in the Bodlian.

⁵ F. Henry, *La Sculpture irlandaise*, p. 134.

⁶ L. Brehier, *Le Sarcophage des Carnes Dechaux*, *Etudes Archéologiques*, Clermont Ferrand, 1910; and L. Brehier, *L'Art chrétien primitif*, p. 14.

⁷ R. Delbrueck, *Antike Porphyrewerke, Studien zur spätantiken Kunstgeschichte*, vol. 6, pls. 31-34.

Eastern, the small lion of Assyrian art, very different from the Celticised versions found in Irish art. David the hunter is shown on horseback defending himself with a sword from the attack of a lion. This scene closely resembles the representations of lion hunts in Sassanian art,¹ and the suggestion of a Sassanian prototype is emphasised by the fact that the horseman of St Andrews has a hawk on his arm, which can be paralleled by engravings on Sassanian silver dishes.² The figure of David as shepherd or warrior is dressed in a short tunic, and bears a spear and a rectangular notched shield. It is preceded by two hounds, a deer, and two beasts of prey. Above this scene there is a curious group where a deer with a monkey on its back, another monkey in a squatting position and a hound chasing a beast of prey, are all entangled in the branches of a tree. This use of vegetation, unknown in Scotland, also points to an Eastern origin. A close analogy is found on a Coptic carved wooden chest of A.D. 600 in the Cairo Museum, where the branches of a vine are twined round the bodies of a lion and a hare (Pl. XLI, c). Another motive on the St Andrews slab, that of the gryphon devouring a quadruped, although derived ultimately from the East, was widespread in the Roman Empire. The two side compartments of the panel are decorated with animal interlacing. The sculptor has taken two animals from the centre compartment, the lion and the deer, and from them formed a purely Celtic design of animal interlacing, but the head of the deer and the curling mane of the lion are clearly distinguishable. This type of animal interlacing is fairly close to that found in the Lindisfarne Gospels. Examples in Northumbrian sculpture are found on the cross shafts from Rothbury,³ and at Aberlady,⁴ where interlaced animals have the same serpent-like heads as have the interlaced lions of St Andrews.

The end panel has a square-angled cross, another parallel with the Book of Lindisfarne, and both the cross and the frame within which it is set are covered with interlacing. In the centre of the cross there is a raised boss with spiral decoration, and in two of the recessed panels behind the arms are raised bosses of interlacing out of which emerge serpents. These recall the raised bosses of the Iona crosses, and are similar in conception to the bosses formed of serpents on an Irish reliquary of bronze in the Musée des Antiquités Nationales at St Germain.⁵ In each of the other two recesses there is a squatting pair of monkeys.

The purely Celtic character of the decorative motives, which appear

¹ Friedrich Sarre, *Die Kunst des Alten Persien*, Berlin, 1923, pl. 104, showing a fifth-century Sassanian silver dish in the British Museum.

² *Catalogue of Eastern Silver and Gold Vessels from the Oriental Provinces of the Russian Empire*, St Petersburg, 1909, fig. 157; and see C. Mowbray, *Antiquity*, 1936, p. 431, fig. 2.

³ T. D. Kendrick, *Anglo-Saxon Art*, pp. 154-158, pl. LXIV.

⁴ T. D. Kendrick, *op. cit.*, pp. 135-136, pl. LI, and *E.C.M.S.*, p. 428, fig. 448.

⁵ F. Henry, "Deux Objets irlandais au Musée des Antiquités nationales," *Préhistoire*, vi. pp. 65-91.

to have been carved by the same hand as the rest of the sarcophagus, show that the whole monument was carved in Scotland and it is most likely that the figure scenes were taken from some portable eastern object in ivory or metal. The Persian and Coptic parallels described belong to a period between the fifth and seventh centuries, and, allowing for a period of time to elapse before they reached Scotland, would fit in with the dating of the monument, on the evidence of the Celtic decorative elements, to sometime in the eighth century. This accords with the legend of the foundation of St Andrews given in the Chronicle of the Picts and Scots.¹ It tells how Hungus, King of the Picts, was promised, in a vision, victory over the Britons if he would dedicate a tenth part of his kingdom to God and to St Andrew; and that after his victory he met a monk called Regulus, a pilgrim from Constantinople, who had come to Scotland bringing the relics of St Andrew. King Hungus gave the city where he met Regulus "to God and to St Andrew to be head and mother of all the churches in the kingdom of the Picts." Though, as Skene points out, this legend is obviously borrowed from the conversion of Constantine, the mention of relics brought from Constantinople may provide a clue to the origin of the figure scenes of the sarcophagus. Of two Pictish kings called "Hungus" (Aengus) one reigned from 731 to 761; the other from 822 to 824. Skene took the view that the monastery was dedicated to St Andrew in the reign of the first Hungus and it is generally accepted that he is right. It seems probable that such an important monument as the altar tomb would belong to the period of the dedication of the church. The fact that such an elaborate type of tomb has not been found elsewhere in Europe belonging to the same period does not disprove this, for so little sculpture of the eighth century has survived that it is impossible to say that such a type did not exist elsewhere at that period, and the stylistic evidence seems conclusive.

A cross-slab at Nigg² (Pl. XLII) is closely related to the sarcophagus of St Andrews. It is over 7 feet high, with a pedimented top. Unfortunately it has been broken and part of it is missing. It is more elaborate than the cross-slabs of the main group, but it retains the usual plan of the cross on one side and figure scenes on the other. The square-angled cross might have been taken from a page of the Lindisfarne Gospels, so closely does it resemble it in proportion, standing out, as Strykowski has pointed out,³ above a sunk background—an effect produced in colour in the manuscript. The square centre of the cross is decorated with interlacing, and the lower part of the shaft with key pattern; the arms are filled with interlaced lion-like forms derived from the animal interlacing on the St Andrews sarcophagus. The panels behind the cross

¹ Skene, *Celtic Scotland*, p. 297.

² *E.C.M.S.*, p. 75.

³ J. Strykowski, *Origin of Christian Church Art*, Oxford, 1923, p. 240.

have raised bosses of spirals and interlacing, bosses formed of interlacing on a background of snakes, and raised bosses on a background of spirals, recalling both the monument of St Andrews and the Iona crosses. The triangular space above the cross contains a small figure scene, representing St Paul and St Anthony. It is much more elaborate than any of the other versions on monuments in Scotland or Ireland and has clearly been taken directly from St Jerome's life of St Paul. The story¹ is followed faithfully: the ancient palm whose wide-spreading branches roofed the natural courtyard where St Paul lived is shown by two trees outlining the panel. The loaf of bread is brought by a crow, and here the scene is used as a symbol of the sacrament; the loaf is in the form of a wafer and the dish below resembles a paten, while the two saints, with books in their hands, kneel in adoration on either side. The two dog-like forms are no doubt the lions which, after the death of St Paul, when St Anthony was lamenting the lack of a spade with which to dig his grave, "came coursing, their manes flying, from the inner desert" and dug a hole with their claws large enough to hold the body. The other side of the slab consists of a figure scene set in a wide frame made up of panels of key pattern and interlacing. The figure scene, although too defaced to be entirely intelligible, is obviously derived, if not actually from the central panel of the tomb of St Andrews, then from the same source. The chief motives are there: David and the lion, with the figure of the sheep beside them; David on foot preceded by a deer and a hound; the gryphon devouring a quadruped. The lion hunt of St Andrews has been transformed into the more usual Pictish deer hunt, and there is the additional figure of a man holding what appear to be cymbals. The carving is crude and in very flat relief.

The monument at Hilton of Cadboll² is an upright rectangular slab, 7 feet 9 inches high, sculptured only on one face (Pl. XLIII).³ Three panels, outlined by plain raised mouldings, occupy the centre of the slab and are set in a wide frame, the sides of which are filled with a Celticised version of the Northumbrian vine scroll (of the type found at St Peter's, York), and the top with the Pictish symbol of the double disc and rod. The top central panel contains a symmetrical grouping of the Pictish crescent and floriated rod, decorated with key pattern and spirals, and two ornamented discs of interlacing. The centre panel introduces a new version of the hunting scene. The chief figures are a man and woman on horseback; the woman is seated sideways on her horse, so that she is seen full face. The man is riding alongside her so that all that can be seen is the bearded profile of his face and the outline of his horse behind hers.

¹ See Helen Waddell, *Desert Fathers*, p. 48 *sqq.*

² *E.C.M.S.*, p. 61.

³ Romilly Allen states, *E.C.M.S.*, p. 62, that there was probably a cross on the other side which had been obliterated to make room for a seventeenth-century inscription.

They are followed by two trumpeters, with long trumpets and draped garments. The scene is completed by two other horsemen bearing spears and circular shields, and a deer closely pursued by two hounds, while a third hound is shown above the woman's shoulder. The symbol of the mirror and comb is carved in the left-hand top corner. This scene is not dissimilar to that described on a cross-slab at Meigle (see Pl. XXXI), but apart from the novelty of the framing of the scene in a separate panel and in the compactness of the composition, there is the introduction of a woman's figure, which is found on no other Pictish slab, and the trumpeters with their rather crudely portrayed drapery. Possibly both scenes are derived from an Eastern source, which would account for their similarity. A scene with trumpeters following behind a horseman occurs on the seventh-century rock carvings of Tac-i-Bostan in Persia.¹

There are a number of very tall cross-slabs in the north-east showing the influence of these three monuments in their figure scenes, in the *ronde bosse* style of carving, and in the animal interlacing. This is no longer the flat animal interlacing of manuscript or metal-work, a drawing transferred on to stone, but the animals whose distorted bodies form a symmetrical pattern now have both depth and solidity. In this group there is a tendency to put the whole of a figure scene into a separate panel, isolated from the Pictish symbols which, on the earlier monuments, were placed in a haphazard way amongst horsemen and fantastic animals. The symbols themselves have now developed into elaborate decorative motives, and only the principal symbols—the discs, the crescent, the mirror and comb, and the fantastic animal—are used. They are now on a very much larger scale than previously, and are placed in a dominant and symmetrical position at the top of the monument; the asymmetrical grouping of the older monuments has given place to a carefully balanced arrangement of motives.

Examples of this group are found at Rosemarkie² and at Shandwick³ in Ross-shire, both of which slabs are elaborately carved and almost purely decorative. The slab at Rosemarkie (Pl. XLIV) has a cross with square-angled terminals (of a type found in the Book of Kells) set in a background of interlacing and with a frame of key pattern. The edges of the slab are decorated with interlacing which terminates in the heads of birds, animals, or serpents. The monument at Shandwick stands in a commanding position overlooking the sea; it is so badly weathered that not much of the carving remains, but amongst other motives four large, interlaced serpents, carved in very high relief, and a panel of trumpet spiral, are still recognisable.

¹ Friedrich Sarre, *Die Kunst des Alten Persien*, Berlin, 1923, plates 86, 87.

² *E.C.M.S.*, p. 63.

³ *Ibid.*, p. 68, fig. 66.

A cross-slab at Aberlemno¹ also belongs to this group, but has a more varied iconography than is usual at this period. The figures of angels on either side of the cross are clearly derived from the figures of St Paul and St Anthony on the cross-slab at Nigg; they have books in their hands, and the same curiously long-shaped heads are bowed in prayer, but the cloaks have been transformed into wings. On the other side of the slab, beneath a group of Pictish symbols, there is a large panel containing a slightly altered version of the hunting scene from Hilton of Cadboll; there is an additional figure of a warrior on foot with shield and spear, and the female figure on horseback is missing. Below this scene are two small panels; in one there is a stylised hippocentaur with the branch of a tree under its arm, of a type already described at Meigle²; in the other are David and the lion, in the Gilgamesh attitude, with a sheep and harp above. The complicated circle interlacing is similar to that found in the Gospel-book of the Irish monastery of Bobbio,³ which is closely related to the Book of Kells.

There are other fragments of slabs at Tarbat, in Ross-shire, showing the *ronde bosse* style of carving of the Iona crosses.⁴ There is also a particularly interesting fragment of a thick slab,⁵ about 1½ feet high, carved on one side with a design of spirals of the Irish chip-carving type (inspired by late metal-work) of the Ahenny cross,⁶ and on the other with an inscription in Hiberno-Saxon capitals (Pl. XLV, a). The lettering is carved in relief and is very close to that on the Ardagh Chalice⁷ in the National Museum at Dublin. The lines are short and the letters at either end have been partly broken away. Romilly Allen gives the probable reading as:

IN NOMINE
IHESU CHRISTI
CRUX CHRISTI
IN COMMEMORATIONE
REO (TE) TII
REQUIESC (IT)

The church of Tarbat was dedicated to St Colman, and the parish of Tarbat originally included that of Fearn, where was situated the monastery of Nova Ferna. "Reotetii" has been suggested as the partially illegible name commemorated on the monument. The death of "Rethaide" or

¹ *E.C.M.S.*, p. 214, fig. 228.

² P. 80.

³ Turin, O. iv. 20. Zimmermann, iii. pls. 108 and 211.

⁴ *E.C.M.S.*, pp. 88-94.

⁵ *Ibid.*, p. 94.

⁶ F. Henry, *La Sculpture irlandaise*, pls. XX, XXI.

⁷ L. S. Gogan, *The Ardagh Chalice*, London, 1932, fig. 8.

"Reodaide" is recorded under the year 726 in the Annals of Ulster, and under the year 763 in the Annals of Tigernach, in both of which he is called "Ab. Ferna." The inscription and the spirals, resembling those on the Ahenny cross, show an interesting connection with the south of Ireland, for Ahenny was near the monastery of Ferns in Ireland, of which it may be assumed that Nova Ferna in Scotland was an offshoot. The south of Ireland had accepted the Roman usage even before the Synod of Whitby and by 710 King Nechtan of the Picts had also accepted it, whereas the monks of Iona refused to conform until 716,¹ so it is probable that at the beginning of the eighth century Pictish Scotland would be in close communication with southern Ireland.

An unusual cross-slab at Kirriemuir² (Pl. XLVI, *a*), in Angus, probably belongs to this period. It follows the general plan of the Pictish cross-slabs with a cross on one side and a figure scene on the other, but with



Fig. 14. David the Warrior.

a, Ardchattan, Argyllshire.
b, Elassie, Angus.

c, Kirriemuir, Angus.
d, St Andrews, Fife.

the exception of the decoration of the cross, which is in key pattern with a pair of interlaced animals *affrontés*, there is little that is Celtic about it. In the two upper panels behind the cross are a pair of angels; they are no longer the stylised type with four wings found on the other Scottish monuments, but they are the conventional angels with long robe

and large wings of the type found in the Saxon chapels at Bradford-on-Avon³ in Somerset, and at Winterbourne Steepleton⁴ in Dorset. In the left-hand lower panel there is the figure of a man with a staff or spear and a small square shield on his arm, evidently related to the figure of David the warrior on the St Andrews sarcophagus (fig. 14). In the right-hand panel there is a crudely drawn scene of animals hunting: an eagle attacking a stag at the top, and two hounds or beasts of prey below. On the other side of the slab there is one large recessed panel containing a hunting scene of unusual type. Two horsemen with spears are shown one above the other, and below a hound seizing a stag. A crude version of the double disc and rod is carved at the top left-hand corner of the panel.

¹ Bede, *Hist. Eccles.*, v. c. 22.

² *E.C.M.S.*, p. 227.

³ T. D. Kendrick, *Anglo-Saxon Art*, pl. CIII, fig. 1.

⁴ T. D. Kendrick, *op. cit.*, pl. CIII, fig. 3.

NINTH- AND TENTH-CENTURY CROSS-SLABS AND CROSSES.

The tall cross-slabs of the last group, with the elaborate *ronde bosse* carving, are with a few exceptions the last of the national type of Pietish cross-slab. They are succeeded in the ninth and tenth centuries by a number of monuments, both free-standing crosses and cross-slabs, in a variety of styles. The cross-slab, although continuing for a time, had lost all the vigour and originality of the Pietish monument. With the establishment of the dynasty of the Scots in 850, Pietish culture must have merged with that of the Scots, and all that was most characteristic gradually disappeared. Owing to the Viking raids the new kingdom of Scotland was cut off from the centres of culture of the Scots—Iona and Ireland—and consequently the quality of its art was very poor.

A group of cross-slabs in Perthshire and Angus show an influence from the later Irish manuscripts and probably belong to the ninth century. With the exception of one monument at Aldbar¹ in Angus which is nearly 6 feet high, they are mostly small slabs, and have a square, rounded, or pedimented top. The carving is in flat, very low relief. The interlacing is simple and rather crude; there are a few representations of Pictish symbols, but no animal art. The cross sometimes has a ring joining the arms and sometimes the shaft is attached to a base. The group is characterised by representations of ecclesiastics with broad, flat figures, usually shown full face, their large, triangular heads hanging heavily between bent shoulders. They are dressed in a tunic, over which a cloak hangs in straight, stiff folds, and are shown holding a book or a staff.

A typical example of this group is at Kirriemuir,² in Angus (Pl. XLVII). The cross has square angles at the junction of the arms and is covered with interlacing of a broad, simple type. In the upper panels behind the cross are two bird-headed figures probably meant to represent evangelists. This motive has not occurred in Scotland before, but it may easily have come by way of Northumbria, where it is found as early as the beginning of the eighth century on St Cuthbert's coffin.³ In the lower panels are two figures with books, probably also representing evangelists. The other side of the slab is divided into two panels. In the upper panel there is a figure with a book, and a crude version of St Paul and St Anthony parting the bread. In the lower panel a figure is shown full face, seated on a chair, the arms of which terminate in animal heads. This type of seated figure is derived from Syrian and Egyptian manuscripts and is found for the first time in Ireland in the St Gall Gospel,⁴ dated to

¹ *E.C.M.S.*, p. 245, fig. 259, *a* and *b*.

² *Ibid.*, p. 227.

³ T. D. Kendrick, *Anglo-Saxon Art*, p. 114.

⁴ St Gall Gospel Book (M.S. 51), see Zimmermann, iii. pl. 186, and G. L. Micheli, *Revue Archéologique*, Juin 1936, pp. 192 *seqq.*

the middle of the eighth century. The arms of the chair ending in animal heads are often found in Irish manuscripts.¹ On one side of the seated figure is the mirror and comb symbol, and on the other an undecipherable motive.

A tall cross-slab at Elgin² is a survival of the elaborate Pictish slabs. Figures representing the evangelists surround the cross, and in a panel beneath the cross interlaced animals closely recall a panel on a fragment of a cross-shaft from Colerne,³ in Wiltshire (fig. 15). On the other side of the slab an elaborate stag hunt fills the lower half of the panel, the hawk on the arm of one of the horsemen recalling the figure on the sarcophagus of St Andrews. The upper half of the panel is filled with a symmetrical arrangement of Pictish symbols.

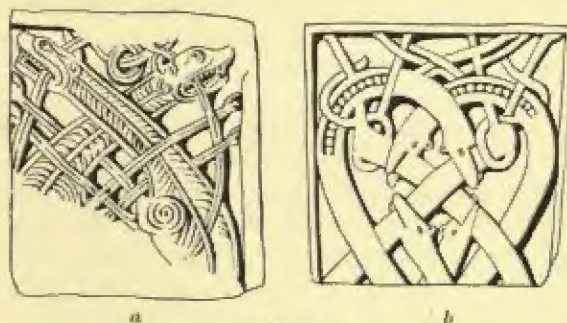


Fig. 15.

a, Cross-shaft, Colerne, Wiltshire.

b, Cross-slab, Elgin.

As well as the influence from Irish manuscripts there was also a strong influence from Northumbrian carving. There is a unique cross-slab from Breechin⁴ (Pl. XLVI, b), so purely Northumbrian in style that it seems certain that it must have been executed in that country, although the cross-slab was unknown in England at that period. It is a rectangular

slab, carved on one side only, in low relief. An equal-armed cross extends to the sides of the slab. A large medallion at the centre of the cross contains the figure of the Virgin and Child, with an inscription in Hiberno-Saxon minuscules given by Romilly Allen as

S.MARIA.MR.XPI,

and set in a frame of small raised bosses. The figure of a bird, possibly a dove, is carved on the upper arm of the cross; on the arms on either side are angels, and on the shaft two saints. In the panels forming the background there were probably representations of the four evangelists; the two upper figures have been partially destroyed, but the lower two are still clear and show the eagle-headed symbol of St John and the lion-headed symbol of St Mark. In style this slab is fairly close to a fragment of a cross from Hoddam or Luce,⁵ in Dumfriesshire, which is carved with a medallion decorated with similar small raised bosses.

¹ For example in the *Book of St Chad* at Lichfield Cathedral and in the *Cassiodorus in Psalmos* in the Durham Cathedral Library. Zimmermann, iii, pls. 245 and 246.

² *E.C.M.S.*, p. 135, fig. 137.

³ T. D. Kendrick, *Anglo-Saxon Art*, p. 211, and pl. LXXXIII.

⁴ *E.C.M.S.*, p. 249.

⁵ *Ibid.*, p. 440, fig. 463.

An interesting fragment of the shaft of a free-standing cross was found built into the wall of the twelfth-century church of St Mary on the Rock¹ at St Andrews (Pl. XLV, *b*). The shaft is divided into panels containing a variety of motives. There is a curious scene where two naked human figures hold a disc over the head of a smaller figure; above it is the beginning of a plant scroll, and below, separated by a band of step pattern, two birds *affrontés* surmounting a pair of beasts' bodies with a single human head. On the other side, beneath a scroll pattern, are two creatures with human heads and bodies, with fishes' tails, entwined. This motive recalls somewhat similar forms on a slab at Banagher,² in Ireland, which belongs to an Irish group dated to about 800.³ Down one edge of the shaft is a debased vine scroll pattern. This cross-shaft is a blending of Pictish and Northumbrian elements, with the Northumbrian predominating. It is stylistically fairly close to the Nurnburnholme cross and belongs probably to the latter half of the ninth century.

Another semi-Northumbrian cross belonging to approximately the same date is at Dupplin, in Perthshire⁴ (fig. 16). It is nearly 9 feet high, and resembles in shape the Northumbrian cross at Thornhill.⁵ There is a raised boss at the junction of the arms, and around it is entwined a plant form: the fat creeper with three-lobed leaves which appears in the Book of Kells and the Leningrad Gospels⁶ (dated to about the middle of the eighth century). All four sides of the shaft are divided into panels, some of them separated from one another by a strip of step pattern as were the panels on the cross-shaft at St Andrews, others by plain raised moulding. The smaller panels are filled with compact designs of interlacing, key pattern, or spirals, the larger with animal motives or human figures. There is the Northumbrian animal with its head turned back and its tongue coming through a slit in its body, of a similar type to that found at Wamphray,⁷ in Dumfriesshire; there are pairs of animals *affrontés*, and groups of birds. Of human forms there is David as a harpist, David and the lion, a horseman with long drooping moustache, and groups of foot soldiers with spears and circular shields.

A number of monuments in Perthshire and Angus are related to the Dupplin cross, and are carved in the same style of very low, but deeply cut, relief.

A cross-slab at Crieff,⁸ in Perthshire, over 6 feet in height, is carved with the three-lobed plant of the Dupplin cross, which sometimes, on this slab, ends in an animal head. This transformation of a plant into

¹ *P.S.A.S.*, xliii. p. 385.

² F. Henry, *La Sculpture irlandaise*, pls. XXXVIII and XXXIX.

³ F. Henry, *op. cit.*, p. 165.

⁴ *E.C.M.S.*, p. 319, fig. 334.

⁵ *Ibid.*, p. 449, fig. 469.

⁶ A Northumbrian Gospel Book (Lat. F.V.I.N. 8); now in Leningrad. See Zimmermann, iii. pls. 321-326.

⁷ *E.C.M.S.*, p. 449, fig. 470.

⁸ *Ibid.*, p. 313, fig. 328.



Fig. 16. Cross at Dupplin, Perthshire, after Romilly Allen.

an animal form is also found in the Leningrad Gospels. The monument is remarkable in no other way and bears no human nor animal figures.

A group in Angus is composed of small cross-slabs, one of the most elaborate of which is at Benvie¹ (Pl. XLVIII, a). It is 3 feet in height and fairly close in style to the cross at Dupplin. Broad interlacing, terminating in animal heads, decorates the shaft and upper arm of the cross, and one edge of the slab. In the upper two panels behind the cross are the stylised figures of four-winged angels—the wings attached to the body by discs. In the lower panels are pairs of entwined, dragon-like creatures, their bodies ornamented with a spiral design. The other side of the slab is divided into two panels, in each of which there is a horseman with long drooping moustache, carrying a spear and circular shield, and with a short sword. The upper of these two figures is accompanied by a small dog, and is very evidently related to the figures on the cross at Dupplin. A cross-slab at Kirriemuir² follows closely the same plan and is clearly carved by the same hand.

Another slab at Kirriemuir³ is carved with the figure of an angel in the same flat, but deeply cut, style of all these monuments. The angel recalls those on the cross-slab at Benvie, but it is more elaborately treated, and in addition to the discs at the junction of the wings there are a pair of circular brooches at the shoulders. A band of step pattern remains down one side of the figure. This type of angel is found carved on the shrine of the Stowe Missal⁴ in the National Museum in Dublin.

A cross-slab at Invergowrie⁵ (Pl. XLIX) follows the usual plan of these later cross-slabs. The side with the cross is reserved for purely decorative motives, one of which is a design of key pattern set in a rectangle. This is a common design in Ireland on crosses and in manuscripts, but not before the tenth century. There is a small strip of rope moulding, which is a motive common on English crosses,⁶ but which has not been found in Scotland before. The other side of the slab is divided into two panels and outlined with step pattern. In the upper panel there are three figures wearing long tunics and cloaks and carrying books: the outer two have disc brooches with a cruciform pattern at the shoulders. This closely resembles the central figure on the top of the "Corp Naomh"⁷ in the National Museum in Dublin (Pl. L). In the lower panel are two interlaced dragons; they bear the same spiral decoration on their bodies as do the dragons on the cross-slab at Benvie and are evidently related to those on the cross-slab at Elgin. This decoration on the bodies of

¹ *E.C.M.S.*, p. 247, fig. 260.

² *Ibid.*, p. 258, fig. 260.

³ *Ibid.*, p. 260, fig. 270.

⁴ A. Mahr, *Christian Art in Ancient Ireland*, pl. 67.

⁵ *E.C.M.S.*, p. 255, fig. 266.

⁶ For example on the St Andrew Auckland Cross, County Durham. See T. D. Kendrick, *Anglo-Saxon Art*, pl. LII.

⁷ A. Mahr, *Christian Art in Ancient Ireland*, pls. 68 and 69.

the dragons recalls a West Saxon version of ribbon style animal interlacing. It is a Norse type of decoration and might imply a Viking influence in the east of Scotland, but in view of the close relationship between the dragon design on the Elgin slab and that of Colerne in Wiltshire, a connection with the south of England seems more probable.

Some fifty fragments of small cross-slabs were found in excavating the foundations of the Church of St Mary of the Rock at St Andrews¹ (Pl. XLVIII, *b*). The majority of these are of no special interest; they have neither figure nor animal carving, nothing but stereotyped designs of spiral, interlacing, and key pattern. From the style of carving and decorative motives they appear to belong to the same period, late ninth and early tenth centuries, as do the monuments of the group just described.

Another carving which is somewhat similar in style and which probably belongs to approximately the same period, is part of an arch from Forteviot,² in Perthshire (Pl. LI). It is carved with a small cross at the centre, at the side of which there is an animal figure, possibly intended to be a lamb. On one side of the cross there is a large seated figure, shown in profile, holding a staff with both hands. It has the curiously elongated eyes of the figures on the cross at Dupplin, a long moustache, elaborately curled hair, and is dressed in a tunic with a band of key pattern at the foot, and a cloak; the folds of the garments have the ribbon-like appearance which is common in such Irish manuscripts as the St Gall Gospels. At the foot of this figure there is a small animal similar to that beside the cross. On the other side of the cross there are two similar but smaller human figures, also holding staves, and possibly the remnant of a third.

A unique cross-slab at Forres,³ Elgin, seems also to belong to this period of mixed influence, although it differs from any other cross-slab in Scotland. It is 20 feet high, which is quite exceptional, and very much narrower in proportion to its height than are the usual cross-slabs. A cross with a ring joining the arms covers most of one side of the slab. The shaft and the panels on either side are covered with interlacing on a small scale. In a panel below the cross there is a figure scene, too much defaced to be intelligible. The other side of the monument is divided into five or six panels containing confused scenes with little figures of men arranged in vertical and horizontal rows. Some of these clearly represent battle scenes; for there are warriors with shields and spears and decapitated bodies. There is a panel with a row of horsemen, another with a Celtic church bell beneath which are five human heads. The sides of the monument are very badly weathered, but the description given by Romilly

¹ *E.C.M.S.*, pp. 357 *seqq.*

² *Ibid.*, p. 149, fig. 150.

³ *Ibid.*, p. 325.

Allen of a panel containing a row "of four mermaids or mermen with their fishlike tails interlaced in pairs so as to form two figure-of-eight knots" sounds not unlike the mermen on the cross-shaft at St Andrews.

TENTH-CENTURY CROSSES.

Fragments of a series of small free-standing crosses have been found in Angus,¹ and in Perthshire,² as well as in the south of Scotland in Northumbrian territory at Borthwick,³ in Midlothian, and at Jedburgh.⁴ Not one is complete, but they appear to have been small crosses, not more than 6 feet in height, with rather slender shafts and a curve at the junction of the arms. The figure carving is crude and the interlacing of a debased type. The shape of the cross is nearer to that of the crosses carved on the cross-slabs than it is to any of the Northumbrian crosses, but both the iconography and the decorative motives are essentially English. The three shafts which survive have each a crucifixion at the centre of the arms; the figure of Christ is clad in a tunic, and small figures on either side represent the two soldiers. This type of crucifixion and its setting between the arms of the cross are found on tenth-century Yorkshire crosses, for example at Aycliffe.⁵ Beneath the crucifixion, on the shaft from Monifieth⁶ (Pl. LII), there are two pairs of figures probably representing the evangelists, and at the base David as a harpist. Pairs of figures shown full face are also found on the late Yorkshire crosses. Other English motives, but not of a dateable character, are the rope moulding, the animal with its head turned back, and the vine scroll, which is found on the edge of the shaft from Abernethy.⁷ It seems certain that these crosses belong to the tenth century and are Northumbrian rather than Scottish, in spite of the form of the cross and an occasional Celtic motive, such as the little naked man on the fragment of the arm of a cross from Strathmartine.⁸

CONCLUSION.

The conclusions reached in this paper are set out in the accompanying diagram, which shows the evolution of the Christian monuments of Scotland. There was first an early group of simple engraved Christian monuments in Ireland and the west of Scotland derived from funerary monuments of the Brito-Roman Church. Then in the middle of the seventh

¹ At Monifieth and Strathmartine, *E.C.M.S.*, p. 265, fig. 275, and p. 266 fig. 277.

² At Abernethy and Forteviot, *E.C.M.S.*, p. 310, fig. 325, and p. 326, fig. 337.

³ *E.C.M.S.*, p. 423, fig. 422.

⁴ *Ibid.*, p. 514, fig. 564.

⁵ Collingwood, *Northumbrian Crosses*, p. 79.

⁶ *E.C.M.S.*, p. 265.

⁷ *Ibid.*, p. 310.

⁸ *Ibid.*, p. 266, fig. 277, b.



century came the development of a more complex decoration: carving in low relief, the first appearance of a Christian iconography, the elaboration of the slab, and, before the end of the century, the first free-standing crosses in Ireland. This art was in use also in Scottish Dalriada. Next there came a transitional group in Scotland, in Pictish territory, of monuments which are partly Christian, partly Pictish "symbol stone," and at the same time there were a number of cross-slabs that were almost purely Irish in character. In the eighth century came the development of the Church in Pictish Scotland, no longer entirely in Columban control and in close touch with Northumbria. At this period the main group of cross-slabs was evolved, combining Pictish, Irish, and Northumbrian elements. These monuments, while retaining their national character, came, about the middle of the eighth century, under new influences from abroad which brought in a *ronde bosse* style of carving, and traces of classical sculpture in the figure scenes. By about the middle of the ninth century the tall cross-slab seems to have been abandoned, perhaps owing to the union of the Picts and Scots and the gradual merging of the Pictish culture with that of the Scots, but also partly owing to the closer contact of the Church in Scotland with the south. At about this period there were a few semi-Northumbrian free-standing crosses, and a number of small cross-slabs, some taking their style of carving from these crosses; others, of a rather debased type, from the later Irish manuscripts. Finally in the tenth century there appeared a small group of free-standing crosses, closely associated with some of the Yorkshire crosses of the same period and, except for a few minor details, purely English.

The exact purpose of the tall cross-slabs of Scotland is not known. Adamnan several times mentions the erection of crosses: on one occasion to mark the spot where St Columba rested on one of his last walks.¹ Crosses and cross-bearing slabs were often raised in monastery grounds in Ireland, and a constant feature of the early Irish monasteries was the presence of a big cross-bearing slab beside a very small oratory.² But the cross-slabs of Scotland which appear to be in their original position are often in the open country where there is no tradition of any ecclesiastical building. In the *Hodoeporicon of St Willibald*³ (a Saxon saint), written about the year 754, it is said that:

"It is the custom of the Saxon race that on many of the estates of nobles and good men they are wont to have, not a church but the standard of the Holy Cross, dedicated to our Lord, and revered with great honour, lifted up on high, so as to be convenient for the frequency of daily prayer."

¹ Adamnan, *Vita Colum.*, iii. c. 24.

² See F. Henry, *Irish Art*, p. 27.

³ *The Hodoeporicon of St Willibald*, *The Library of the Palestine Pilgrim's Text Society*, vol. iii., London, 1897.

Very possibly a cross-slab would mark the site of a preaching place in Scotland.

What factors constitute the national character of the Pictish cross-slab is an interesting problem, for, apart from the animal art and the Pictish symbols, there does not appear to be one single motive that cannot be traced to an outside source, and yet all that the Pictish artists adopted was so thoroughly absorbed that the monuments present a surprisingly harmonious whole. What they neglected is as revealing as what they accepted: decorative motives from any source, from manuscripts, from metal-work, from carvings of wood, of ivory, or of stone, were eagerly adopted, but although at the same period the free-standing cross was in use both in Ireland and Northumbria, the Picts remained resolute in their refusal to adopt it, and the tall cross-slab, unknown in Northumbria and little used in later days in Ireland, remained their national monument. In iconography it was the same; they seem to have been singularly uninterested in Christian themes. Those found on the monuments of the main group—scenes representing David, Jonah, Daniel, the meeting of St Paul and St Anthony, the temptation of St Anthony—are all found on monuments in Ireland belonging to a period from about 650 to 750,¹ and it is no doubt from that country that they were introduced into Scotland. All the Christian themes have a tendency to be transformed into motives that are decorative rather than iconographical, far from their early Christian meaning as symbols of deliverance and redemption. With the elaborate Eastern monuments there seems to have been a widening of interest. The sarcophagus of St Andrews shows a more realistic use of the theme of David, and its connection with Sassanian art makes a directly Eastern source seem probable. The Nigg cross-slab shows a familiarity with St Jerome's life of St Paul and gives a more elaborate version of the theme than is ever found in Ireland. The introduction of the beast-headed symbols of the evangelists may have come through Northumbria or through manuscripts, but they cannot have retained their significance in Scotland, for they are nearly always shown with two symbols of St John on the same slab. The crucifixion, although found on monuments in Ireland as early as the seventh century, never occurs on slabs in Scotland. Even the cross, which forms the dominant motive of the slab, is presented in a purely decorative way. The source and meaning of the non-Christian themes are obscure. Doctor Joseph Anderson has suggested the mediæval *Bestiaries* as the source for a number of the animal scenes,² but there seems to be no parallel exact enough to make such a derivation more than a supposition. Reference has already been made to traces of totemism in the clan names of the Picts, and their preoccupation with animal art

¹ See F. Henry, *La Sculpture irlandaise*, p. 134.

² *E.C.M.S.*, p. lxxxii.

might have its source in this. Too little is known of the religion of the Picts to do more than guess at the pagan background of the monuments,¹ but it seems probable that they show traces of Northern European mythology.² Mention has been made of the analogy of the human sacrifice on the cross-slab at Glamis with that of the Gundestrup Cauldron; the numerous scenes of stag hunts might be connected with the Celtic god Cernunnus, the god with a stag's horns, and the woman on horseback at Nigg with Epona, the goddess associated with horses,³ while some of the versions of the deliverance of Jonah might be a confusion with the "devouring monster" of Gaulish art.⁴ Legends and folk-tales very probably account for many other motives, such as that of the man grasping two birds by the neck which is found on the slab at Rossie Priory, as well as at White Island in Ireland, and on the Franks Casket. It has not been possible to determine the significance of the "Pictish Symbols" on the cross-slabs, whether it was religious or tribal, but it is one of the strangest features in the strange episode in Christian art which the Pictish monuments present.

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¹ Adamnan mentions more than once (ii. c. 34 and i. c. 37) opposition to St Columba by the "Magi"; this has usually been taken to mean "druids," but it is by no means certain that they were really such. Druidism had two sides to it, the intellectual and the magical, and it is quite possible that any form of magic would be taken by the Irish monks to be Druidism. References to "sacred springs" (ii. c. 9) seem to indicate some form of nature worship.

² F. Henry finds traces of Celtic paganism in the Irish Christian monuments. *La Sculpture irlandaise*, p. 131.

³ See H. Hubert, *The Celts*, p. 238.

⁴ Rhelms and Châteauroux museums.

ABBREVIATIONS.

- E.C.M.S.* *The Early Christian Monuments of Scotland*, a classified, illustrated, descriptive list of the monuments, with an analysis of their symbolism and decoration, by J. Romilly Allen, and an introduction, being the Rhind Lectures for 1892, by Joseph Anderson. Edinburgh, 1903.
- BEDE, Hist. Eccles.* *Venerabilis Baedae historia ecclesiastica gentis Anglorum. Annals of Ulster. Annals of Ulster, otherwise Annals of Senat, a Chronicle of Irish Affairs, from A.D. 431 to A.D. 1549*, edited with a translation and notes by William M. Hennessy. Dublin, 1887 and 1893.
- ZIMMERMANN.* *Vorkarolingische Miniaturen*, by E. Heinrich Zimmermann. Berlin, 1916.
- SALIN.* *Thierornamentik. Die altgermanische Thierornamentik: typologische Studie über germanische Metallgegenstände aus dem IV bis IX Jahrhundert, nebst einer Studie über irische Ornamentik*, by Bernhard Salin. Stockholm, 1904.
- ADAMNAN.* *Vit. Colum. Vita Sancti Columbæ auctore Adamnano. The Historians of Scotland*, vol. vi. Edinburgh, 1874.
- P.S.A.S.* *Proceedings of the Society of Antiquaries of Scotland.*
- J.R.S.A.I.* *Journal of the Royal Society of Antiquaries of Ireland.*
- P.R.I.A.* *Proceedings of the Royal Irish Academy.*
- F. HENRY.* *La Sculpture irlandaise pendant les douze premiers Siècles de l'Ere chrétienne.* Paris, 1933.
- F. HENRY.* *Irish Art in the Early Christian Era.* London, 1940.

VII.

THE BLACK TURNPIKE. BY CHARLES BRODIE BOOG
WATSON, F.S.A.Scot., F.R.S.E.

Did Mary Queen of Scots pass the night, after her surrender at Carberry Hill, in the Black Turnpike?

"Tradition" says that she did. And this seems fairly certain. But it is not generally known that there were *two* Black Turnpikes, one on the north side of the High Street, which vanished long ago; the other on the south side of the street, a view of which is given by Arnot in his *History of Edinburgh*, second edition, 1788, p. 273.

For long this Black Turnpike was accepted as the lodging of the unfortunate Queen, the night after Carberry Hill.

The earliest mention of this tradition which I have seen is in the *Gentleman's Magazine*, 13th February 1788, part 1, p. 312, where we find a letter addressed to the editor—Mr Urban.

"Since the new part of Edinburgh and its communication with the old town has been so far completed as to evince the propriety of making the old part correspond in some degree with the new: a plan has been

formed to continue a spacious street directly southward from the North Bridge to that part of the town where the College or University is intended to be rebuilt, but in order to effect this the ancient Provost's house in Peebles Wynd must necessarily be taken down [Footnote: 'The old house where Q. Mary is said to have lodged is to be pulled down in eight or ten days hence.' Extract of a letter from Edinburgh dated Sept. 20, 1787]. This circumstance together with its being the most ornamental of any house of its time, and being by tradition the house in which Mary Queen of Scots was confined after her surrender at Carberryhill may possibly induce you to preserve an engraving of it in your valuable repository." The engraving is on the page following. The letter goes on to give Maitland's account of the Black Turnpike, extending into a long description of Mary's incarceration, the insolence of the mob, her appeal to their pity, the effect thereof, etc.

This has often been quoted, with no indication of its source.

It is in this narrative that the dimensions of the room, quoted by Chambers, are given, thirteen feet square and eight feet high, evidently taken from the traditional room, then existing and accessible. The letter to the *Magazine* is signed "O.R." and the writer must have sent the sketch reproduced, marking on it A, the wooden galleries, and B, the window of the said little room.

These letters are omitted in the engraving, but are mentioned in the text.

Reference to this article in the *Gentleman's Magazine* is made by William Creech, and may be found in his *Edinburgh Fugitive Pieces*, published in 1815, at page 65. Writing of the changes made in Edinburgh, and specially those due to the building of the South Bridge, he says: "The oldest stone building in Edinburgh was pulled down, where Queen Mary lodged the night after the battle of Carberryhill. It was then the house of Sir Simon Preston of Craigmillar, Lord [*sic*] Provost of Edinburgh." In a footnote he adds, "See an account and plate of this house in the *Gentleman's Magazine*, about three or four years ago."

Robert Chambers knew the article, and quoted largely from it, without indicating whence he drew the description. He even slightly embroiders it, and puts his seal to it by the weighty words, "This fact is perfectly authentic."¹

But in the later editions, 1848 and 1868, he makes no reference to the Black Turnpike.

Sir Daniel Wilson, in his *Memorials of Edinburgh in the Olden Time*, 1848, vol. i. p. 79, says: "She was lodged in the Black Turnpike, the town house of Sir Simon Preston." At the foot of page 25 of the second volume, he again calls it "the town house of Sir Simon Preston, Provost

¹ See *Traditions of Edinburgh*, 1825, vol. i. p. 187.

of Edinburgh 1567." He adds, "It was lofty and of great extent, and the tradition of Queen Mary's residence in it had never been lost sight of."

The slightly shaky support which he gives to this statement is a quotation from the *Caledonian Mercury* of 15th May 1788, the year of its demolition, "It may be true what is alleged that Mary was lodged in it in the year 1567."

Both Robert Chambers and Sir Daniel Wilson quote from the reference made to the building by Wm. Maitland, F.R.S., in his *History of Edinburgh*, 1753, p. 187, c. 2. But Maitland makes no reference to any tradition of Mary's being lodged in it.

In his revised edition of the *Memorials* (1891), vol. i. p. 101, Sir Daniel states that "She was lodged in the town house of the Provost, Sir Simon Preston. According to the narrative of Archbishop James Beaton 'thay lugit hir Majestie in the Provest's luging forment the croce upon the north syd of the gait,' and this is confirmed by old title-deeds which determine its site at the entrance to the Exchange.¹ But tradition had long assigned the Black Turnpike on the south side of the street as the scene of her reception. This ancient building stood to the west of the Tron Kirk, etc."

At the foot of the page he has a footnote referring to his article in the *Proceedings* of the Society of Antiquaries of Scotland, vol. xxiv.

In vol. ii. p. 34 of the same edition of the *Memorials* we read, "the famous Black Turnpike, assigned by the traditions of a later age as the Town house of Sir Simon Preston, Provost of Edinburgh in 1567, to which Queen Mary was brought by her captors."

We turn to Sir Daniel's article on the Black Turnpike, in vol. xxiv. of the *Proceedings* of the Society of Antiquaries of Scotland, p. 431, 14th April 1890, which contains most interesting quotations, well worth repetition, instancing the words of Du Croc, the French Ambassador, "Voilà les deux armées ensemble qui se retirent en ceste ville de Lislebourgue [Edinburgh] et logèrent la Royne en la maison du Prévost."

He quotes Sir James Melville: "Hir Majeste was that nycht convoyed to Edenborough and logit in the midis of the toun in the Provestis logging"; while Archbishop James Beaton says: "Thay logit hir Majestie in the provest's logging forment the croce upon the north syd of the gait."

North side, that is definite.

Sir Daniel cites the information contributed by Mr Peter Miller, F.S.A.Scot. (p. 435): "From a careful research in the Registers of Sasines, confirmed by other proofs,² it appears that the Prestons of Craigmillar obtained possession of a tenement on the north side of the High Street, from 1423 to 1718."

Mr Miller gives no authority for this statement, and my own study of

¹ This on the groundless information supplied by Mr Peter Miller.

² He gives none.

the charters, protocols, and other records of the city fails to substantiate it. Whatever property the Preston family owned or occupied in the High Street, it is certain that it was another man's house which was occupied by Sir Simon Preston, the Provost, as is proved by the following extract from the Minutes of the Town Council of 29th April 1569: "The quhilk day in presens of the baillies and counsals foresaids comperit Maister David Makgill advocat and componit how that Sir Simon Prestoun of Craigmiller provest for the honour and defence of his office the tyme he was electit thairto at the will and desyre of thair predecessors he take the lugeing of umqle George Hendersoun of Fordellis quhilk he now occupeis of mynde to remaine and be amangs them for thair weillis and not his nottheles the heritoure of the said lugeing had callit him befor the baillies for certain birun males [rents overdue] and had obtenit thair decreit thairupoun and therefore willit thame according to thair honors to tak sum ordour with the said heretour tuching the saids males and to gyf him thair anser. The said Maister David being removit the baillies and counsals foresaid after avisement findis and decidis that nowther thay nor thair predecessors hes bean in use of paying of the provests hous male in any time bigane nowther hes thair bene ony af his males payit be thair predecessors before thair entrie in office. And further knawing thair commoun gude thirlit and the gude toun far behynd the hand quhairfor thay can nocht consent for thair tyme to pay ony of the said provest males becaus thay have nowther consuetude nor utlr warrand for thair releif quhilk thay ordaine to be schawn to the said Maister David for his anser."¹

This shows clearly that when Sir Simon Preston of Craigmillar was promoted to the Provost's chair in August 1565—as the result of a letter sent by the Queen to the Council—(which post he held till Michaelmas 1569) he had *no* house in Edinburgh. In order, therefore, to have a residence in the town and to discharge the duties of his office comfortably and effectively, he hired as a sub-tenant from Master David Makgill, advocate, the house which the said David occupied, namely "the lodging of umquhyle George Henderson of Fordellis, and now owned by his son, James Henderson."

This he did, expecting that the Town Council would hold itself responsible for the rent of the house, seeing that he had taken it for the advantage of the town, rather than for his own.

The Council, however, did not see their way to do so, and the heritor, James Henderson of Fordell, owner of the house, held Mr Makgill responsible and brought the matter before the bailies, who granted a decret in his favour. Against this, Mr Makgill appealed to the Council,

¹ This passage was omitted from the Extracts from the Records of the Burgh of Edinburgh issued by the Scottish Burgh Records Society.

evidently hoping that the town would acknowledge the responsibility and satisfy the heritor.

But the Council declined to do so, basing their refusal on two grounds, lack of precedent and want of money to pay the rent, and left Makgill to fight it out with the heritor, as landlord, and the Provost, as sub-tenant.

We see then that the house, or rather the lodging, of Sir Simon Preston was owned by the Hendersons of Fordell, who had let it to Mr David Makgill, advocate, who in his turn had sublet it to Sir Simon. Where was this house?

From Archbishop Beatoun we know that it stood on the north side of the High Street, "fornent the croce."

In the *Diurnal of Occurrents* (Bannatyne Club, p. 115) we read: "Upon the fourtene day of Junii (1567) . . . the quenis majestie . . . come fra Dunbar toward Seytoun and remaynit thair unto the XV day of the said moneth, quhilk wes sonday . . . and quhen sho come to Edinburgh sho wes lugeit in James Hendersones hous of Fordell, being thane the provest of Edinburghis hous quhairin he remaynit [was dwelling] . . . upoun the saxtene day of Junii at 10 houris at evin, our souerane Lady wes convoyit . . . to the Palice of Halyrudhous."¹

From this we see that the unquestioned Black Turnpike of Mary Queen of Scots was the house *occupied* by the Provost, Sir Symon Preston, owned by James Henderson of Fordell, and let by him to Mr David Makgill, advocate.

From one of Laing's Charters² we find that James Henderson of Fordell resigned a tenement on the north side of the High Street, between the tenement of umquhyle Marian Scott and John Gilbert,³ goldsmith, on the west, the tenement of John Carkettill⁴ on the east, the North Loch on the north,⁵ to Thomas Henderson, merchant, burgess, and his wife Katherine Henderson.

From another charter⁶ we learn that the said tenement was to be held in burgage.

A third charter⁷ informs us that James Henderson of Fordell, as heir to his grandfather George Henderson, inherited the tenement which he resigned to Thomas Henderson and his wife Katherine Henderson.

By a later charter⁸ James Henderson of Fordell empowers Josua Henderson, writer, to resign in the hands of the Provost and bailies a feuduty of 130 merks, accruing from the great dwelling-house on the north side of the High Street between the Auld Provost's Close on the east, the

¹ This important passage is omitted in the extracts from the *Diurnal of Occurrents*, which form part of the contents of vol. xvi. of the Old Edinburgh Club.

² No. 831, 16th January 1567-68.

³ These names occur frequently in the protocols.

⁴ Evidently the south boundary was the High Street.

⁵ No. 832, 20th January 1567-68.

⁶ No. 833, 29th July 1568.

⁷ No. 1238, 20th March 1592-93.

North Loch on the north, the neighbours being the heirs of Marion Scott,¹ John Gilbert,¹ John Carkettill of Finglen,¹ and heirs of Thomas Russell; the house being let to Thomas Henryson, merchant, Edinburgh, and his wife, Katherine Henryson. It is now resigned to Robert Henryson, second son of the granter, James Henderson of Fordell, reserving to himself the life rent of the said sum, which is redeemable by payment of a rose noble within St Giles' Kirk. The Hendersons seem to have conveyed the house to Alexander Lauder of Haltoun, whose widow, "Ladie Hatton," occupied it in 1634, when the census for the Annuity Tax was imposed.

The Auld Provost's Close, 189 High Street, disappeared when Cockburn Street was made, *circa* 1859. By that time it was known as the East Fleshmarket Close.

On 3rd July 1588 the Town Council appointed a number of "visiters for ilk quarter of the town to try and oversee the life and conversation of the residents," etc.

John Jackson, from whom Jackson's Close may derive its name, was visiter in "Auld Provost's Close." Next, on the east, came George Carkettill,¹ and then Robert Henryson,¹ in John Corseris Close, which I would identify as Adamson's, alias Caichpell, alias Bull's Close.

A charter granted by Alexander Guthrie, Town Clerk, on 1st February 1634, in favour of James Livingstoun of Beil, is of a tenement formerly of James Henderson of Fordellis, and after him of Thomas Henderson, between the tenement of umquhyle John Carkettill¹ and the Old Provost's Close on the east, and the tenements of John Gilbert,¹ the said James Henderson, and Ramsay of Dalhousie on the west.

In the "Annuity Roll" of 1634² we find this same James Livingstone, of the Bed chamber (spouse of Agnes Nasmyth), on the west side of the Old Provost's Close.

Reference to this is made in a protocol of George Home, of 4th February 1730.

In the division of the town into six parishes, made 24th December 1641, the North Parish extended from William Reid's Close³ down the north side of the High Street to the Laird of Haltoun's house, called the *Black Turnpike*. The North-east Parish extended from Haltoun's house down the north side of the High Street to the Netherbow, etc.

In the Annuity Roll, 1634, Lady Haltoun appears as owner and occupant of a house on the north side of the High Street, just east of Adamson's, or Bull's, Close, due north of the Salt Tron.

In a later division of the town into six parishes, 5th December 1656, the second division of the North Parish begins as in 24th December 1641,

¹ These names occur frequently in the protocols dealing with this locality.

² Old Edinburgh Club, vol. xiii. p. 111.

³ Alias Lower Baxters' Close, obliterated by Bank Street.

at Wm. Reid's house, and extends to Jackson's Close. [Wm. Reid's Close, later Lower Baxters' Close.] The third and fourth divisions begin at Jackson's Close, and follow the lines of 24th December 1641. This suggests that the Laird of Haltoun's house was on the west side of Jackson's Close.

Again in the division of the town into six parishes, 9th November 1662, the North Parish extends from William Reid's Close down the north side of the High Street to the Laird of Halton's house, called the BLACK TURNPIKE or DAVID MCGILL's land. The North-east Parish extends from the Laird of Haltoun's house, or David McGill's land, down the north side of the High Street to the Netherbow, etc.

It seems quite clear that Sir Simon Preston, on entering office as Provost, took a sublease from David McGill, advocate, of a house on the north side of the High Street, owned by James Henderson of Fordell. A tenement on the north side of the High Street, on the west side of the Old Provost's Close, was at one time owned by James Henderson of Fordell, and after him by Thomas Henderson, merchant, burgess. Later it was acquired by James Livingston of Beil, and was by him disposed to Sir James Carmichael of that Ilk, Treasurer to His Majesty the King, as recorded by Alexander Guthrie, vol. vi., 16th August 1637. Sir James conveyed the tenement to his wife, Dame Agnes Wilkinson, and to their son Daniel (Alexander Guthrie, vol. vi., 4th January 1641). From various charters it is clear that the property of the Hendersons of Fordell lay on both sides of the Old Provost's Close.

It is perhaps worth noticing that Gordon of Rothiemay, in his view of Edinburgh in 1647, shows only one turnpike tower on the north side of the High Street, directly north of the Salt Tron,¹ which is at least suggestive of the BLACK TURNPIKE of Henderson of Fordell—of David Macgill—of Sir Simon Preston—of Mary Queen of Scots.

Have we then actually a tiny view of the very building?²

Mr John and Mr David Mackgill, sons to umquhyle Mr James Mackgill, Clerk Register, were admitted "ordinar" advocates, 20th December 1580. Mr David, King's advocate, 1582, died 1596; he was created Lord of Session, as Lord Nisbet, 27th June 1582.

It is rather interesting to learn that the tenement on the west side of the Old Provost's Close, occupied by the above-mentioned Sir James Carmichael of that Ilk, His Majesty's Treasurer depute, sometime of James Henderson of Fordell, contained a hall, three rooms, a kitchen, a pantry, and two "museola,"³ which I understand to be writing or business rooms, within the inner room.

¹ Weighing machine—beam and scales.

² One apparent difficulty in this identification is Beatoun's statement that the Provost's lodging was forment the cross.

³ This is a diminutive of *museum*, a study, and must mean a small study. The word occurs occasionally in the descriptions given in the protocols of the accommodation contained in a dwelling-house.

Such is the description given in the protocol of Alexander Guthrie, vol. vi., 16th August 1637.

Which room served as the prison for fallen royalty?

If conjecture, or rather inference, be allowed, surely we must recognise that of the *two* Black Turnpikes, Mary spent her first night as a captive in that which stood at what is now the head of Cockburn Street, that in process of time this house was demolished, and that the identification of the scene of Mary's Captivity in THE BLACK TURNPIKE fitted across the street to the then surviving Black Turnpike, and stuck to it.

VIII

SIR GEORGE MACDONALD, K.C.B.: 1862-1940.

A MEMOIR

By JAMES CURLE, LL.D., F.S.A.Scot., F.S.A.

George Macdonald was born in 1862 in Elgin, his father, Dr James Macdonald, being at the time a master in the Elgin Academy. In the same year his parents moved to Ayr, where Dr Macdonald had been appointed Rector of Ayr Academy. Dr James Macdonald was a scholar and an antiquary. He joined the Society of Antiquaries of Scotland in 1874, and served on the council. He assisted in the excavation of the Roman Fort at Birrens, and contributed to the *Proceedings* a study of the inscribed stones found there. He held the Rhind Lectureship in Archæology in 1896. His interest in the Antonine Vallum is commemorated in his *Tituli Hunteriani, An Account of the Roman Stones in the Hunterian Museum*.

George Macdonald thus from his earliest days was brought up in an atmosphere of scholarship and archæology, which surrounded him for the rest of his life.

At Ayr Academy he received his early education. From Ayr he went to the University of Edinburgh, where in 1882 he graduated as Master of Arts with First Class Honours in Classics, and obtained a scholarship as the most distinguished graduate of the year in the Classical Department. A period of study in Germany followed, and then returning to Edinburgh in 1883 he gained the Ferguson Scholarship in Classics. The greater part of the next winter was spent in Rome, and in 1884 he matriculated at Balliol College, Oxford, where he attained distinction, being placed in the First Class in Classical Moderations in 1885 and in the Final School of Literæ Humaniores in 1887. On his return to Scotland he served for a time as a master in the Kelvinside Academy, Glasgow,

where his father then held the post of Rector. In 1892 he joined the staff of Glasgow University, becoming Senior Assistant to Professor Gilbert Murray, who held the Chair of Greek.

It was no doubt due to his knowledge of Greek literature and history that in 1893 Macdonald was appointed by the University as Honorary Curator of the Hunterian Coin Cabinet, an appointment which was to have a profound influence on his future career. The magnificent Hunterian Collection, which had been practically buried, became under his curatorship once more accessible to scholars all over the world. The first volume of his *Catalogue of the Greek Coins in the Hunterian Collection, University of Glasgow*, appeared in 1899, the second and third volumes following in 1901 and 1906. The work was received with enthusiasm, and established his authority as a numismatist. The book was "crowned" by the Académie des Inscriptions et Belles Lettres, and he was awarded the Prix Allier de Hauteroche.

His tenure of office as Curator only ended with his life. In addition to many contributions to numismatic literature he published his volume on *Coin Types*, the subject of the Rhind Lectures for 1904, a singularly lucid and judicial summing up of the questions concerned, and in 1916, in a more popular form, his *Evolution of Coinage*. His work on numismatics brought him the honorary membership of many societies, and a reputation in both Europe and America. He was Medallist of the Royal Numismatic Society in 1913 and of the American Numismatic Society in 1926.

In 1902 Macdonald resigned his Assistantship in Glasgow University and joined the Scottish Education Department, but his success as an organiser and the eminence he attained in the public service lie beyond the scope of this short Memoir.

When he turned to the study of Roman Archaeology he possessed an equipment such as has rarely fallen to the lot of Scottish antiquaries. In addition to an eminently judicial mind and broad general culture his studies in coins had trained him in habits of minute and careful observation. He took no part in the excavation of Birrens in 1895, being occupied with his numismatic studies; but he tells us that he heard "much talk about it and about," and we may feel sure that in his father's house the Antonine Wall Report of the Glasgow Archaeological Society issued in 1899 was the subject of interested discussion. He was not adventuring into an unknown country when he came in 1902 to assist in Mr Whitelaw's excavation of the Roman Fort on the Bar Hill, Dumbartonshire, and to join Mr Park in writing the Report.

This fort occupied the highest point of the Antonine *Limes* midway between the Forth and Clyde, standing high above the valley which from east to west traverses the isthmus. By a piece of rare good fortune,

on the very first day of their operations the workmen lit upon the well. Its contents could not fail to kindle the imagination of an antiquary. From it came the broken sandstone columns which must have lined the courtyard of the *Principia*: the dedicatory tablet of the Baetasian Cohort that had once occupied the fort, and their altar which had stood in the shrine, and with these a strange collection of miscellaneous objects, including a great amphora, tools, bridle-bits, and worn shoes—familiar personal belongings which coming back to the light of day seemed to bring with them the very presence of the long-vanished garrison that once kept watch across the valley to the northern hills, in whose shadow *latrunculi* might be gathering. Not only did the work reveal the denizens of the fort, but lying below the foundations of the Antonine buildings it uncovered for the first time the outlines of a small outpost which must have been one of Agricola's *praesidia*. The report of the excavation showed a marked advance in the style of such publications, the little fort stood out against its historic background, the narrative was clear, and it was eminently readable.

Although numismatics remained a source of abiding interest to Macdonald, the episode of the excavation of Bar Hill proved a turning-point in his career, and more and more he devoted the leisure of a busy life to the study of Roman Britain. The first result of his introduction to the Antonine Vallum came in 1908 in an invitation to deliver the Dalrymple Lectures in the University of Glasgow. These lectures, given in the spring of 1910, formed the main thread of his *Roman Wall in Scotland*, published in the following year, and dedicated to the memory of his father—*Caledoniae Romanae indagatori studiosissimo*. Among those whose help is recorded in the preface is the name of Professor Francis Haverfield, whose stimulating enthusiasm in the investigation of Roman Britain was to constitute a bond of interest and of friendship broken only by Haverfield's untimely death.

In *The Roman Wall in Scotland* all the information then available was brought together, but the book was designed to be more than a mere archaeological record, for no one realised better than the author that here literature and history must go hand in hand with archaeology. "For those who embark on the study," he writes in his *Agricola in Britain*, "a sound discipline in history is an indispensable prerequisite and some acquaintance with literature an immense advantage." He sketched the literary and historic background, including the organisation of the Roman Army. The records of older antiquaries were laid under contribution. The course of the Wall and the sites of the forts, many of them wellnigh forgotten, were surveyed and approximately fixed, and the inscriptions reinterpreted. But on the Wall excavation had hardly begun to play its part. Except for the examination of its structure undertaken by the

Glasgow Archæological Society, there had been little spade-work done. Prior to the work at Bar Hill only two of the forts, Castle Cary and Rough Castle, had been excavated; although much careful work had been done at these, the time available was short, and the experience of those in charge of the work was insufficient to recover all that was to be learned from the sites. The need for fuller investigation was clamant. Macdonald closed his final chapter with a plea for the awakening of the public conscience to the fact that a national monument was in danger, at some points in grave danger, of being entirely swept away, and for the organisation, ere it was too late, of a proper examination of the sites that still admitted of search. He held that a thorough investigation of the *Limes* would go far to enable the complete story of the Roman occupation of the country to be fully recovered. The second edition of *The Roman Wall in Scotland* shows the response to this plea, and how largely that response was due to his own efforts.

He followed with interest the work carried on at Newstead between the years 1905 and 1910, where below the Antonine fort the outlines of Agricolan earthworks were traced, and where for the first time the study of the pottery gave a clue to distinguish the sites occupied during the Flavian advance from those of the Antonine period. He read the proofs of *A Roman Frontier Post* in which the results were published and made many helpful suggestions, besides contributing a careful study of the coins found. The collection, varying from legionary *denarii* to a coin of Crispina, was the largest gathered from an excavated site in Scotland. It gave him the opportunity to review the numismatic evidence of the length of the Roman occupation of Caledonia, and, besides finding in the Newstead coins additional proof of Haverfield's contention that the occupation had come to an end in the reign of Marcus Aurelius or early in that of Commodus, he was led to conclude that the territory conquered by Agricola was not relinquished on his recall, which occurred not later than A.D. 85, but must have been held after the accession of Trajan in A.D. 98. His acute analysis of the plans of Inchtuthill, Ardoch and Camelton published in 1919 in his *Agricolan Occupation of North Britain* gave further support to this conclusion, which controversy did not lead him to abandon.

In 1912 he was invited by the Treasury to report, with a view to settling the ownership, on an important find of gold coins discovered in the course of the excavations at Corbridge. It was his first experience of the many problems offered by Hadrian's Wall and the sites which lay behind it. Incidentally it brought him into touch with Haverfield, whose enthusiasm was the mainspring of the undertaking. His report¹ is an excellent example of his skill in weighing evidence, of his wide scholarship,

¹ The Corbridge Gold Find of 1911.

and of his dry humour, a quality hardly to be looked for in a document of the kind.

But the Antonine Wall and the occupation of Caledonia were never far from his thoughts. The excavation of Balmuildy, undertaken in 1912 by Mr Miller for the Glasgow Archaeological Society, provided the first instalment of the work that he was so anxious to see carried out. Mr Miller recovered an admirable plan of a fort. The position of the administrative buildings and the sites of the barracks were ascertained, and there were bath-houses both within and outside the defences. The work was described in an exhaustive report. The examination of the forts at Old Kilpatrick, Mumrills, Cadder and Croy Hill was to follow. Balmuildy could not but give a fresh impetus to his interest in the study of the Wall, and especially from 1913 onwards he began a single-handed effort, which continued as opportunity offered during the twenty years that followed, to solve its problems. Needless to say he traversed the whole line several times on foot. Those who shared his enthusiasm and accompanied him on his expeditions can testify to his powers of endurance, which neither rain nor bitter winds could abate. Something of the tenacity with which he carried on his quest may be seen from his paper of 1915 on *Discoveries on the Line of the Antonine Wall*. He had traced the Wall to its western end, and was trying to ascertain the dimensions of the fort at Old Kilpatrick.

Next day—Saturday, December 27th—was the last I could spare for the work at this particular time. Unfortunately the weather was so bad that it could hardly have been worse. It was blowing half a gale, the field was partially flooded, and wild showers of sleet made digging almost impossible.

But his survey, carried out in good weather and in bad, cleared up many doubtful points and practically established the line from sea to sea.

It was characteristic of his method that no source of evidence bearing on his studies was neglected. Gordon, Horsley, Maitland or the writers of the *Statistical Account of Scotland* might give some indication of the position of long-levelled ramparts or ditches. But of all the earlier observers none was more helpful than General Roy, who had the merit of being not only a zealous antiquary but a trained surveyor. His interest in Roy's work led him to a study of the General's journeys in search of Roman earthworks and to make a careful collation of his manuscripts and plans. His researches, under the title "*General William Roy and his Military Antiquities of the Romans in North Britain*," appeared appropriately in the *Archæologia* of the Society of Antiquaries of London, to whom we are indebted for the publication of Roy's archaeological classic.

The death of Francis Haverfield in 1919 brought a long and close friendship to an end. No one in his day had done more to encourage

the study of Roman Britain and to gather together the details of the latest discoveries, and yet the great work on the Northumbrian Wall which he might have written never saw the light. In 1907 he gave in Oxford his brilliant Ford Lectures on "The Roman Occupation of Britain." He had intended to issue them in a revised and expanded form, but little work had been done at the time of his death to prepare them for publication. Maedonald, with characteristic devotion and skill, was able with the aid of his notes to recast and publish the lectures, preceded by a sympathetic biographical sketch, a fitting tribute to their friendship.

Although Maedonald made no claim to expert knowledge in epigraphy, something of Haverfield's mantle fell upon his shoulders, and more and more his sound judgment and wide knowledge added to his correspondence and to his friendships.

In 1923 he sent his first contribution to Pauly-Wissowa's *Realencyclopädie*, and his articles followed regularly to the end of his life. His numismatic studies had already brought him into contact with German scholars, and his researches on the Antonine Wall led him naturally to follow the work carried out on the Roman *Limes* in Germany. In 1927 he was invited to assist in the celebration of the semi-jubilee of the Römisch-germanische Kommission at Frankfurt, which he attended and read an important paper in which he discussed the coast defences of Britain known as the forts of the Saxon Shore (*Die Küstenverteidigung Britanniens gegen das Ende der römischen Herrschaft*).

In 1928 he had the pleasure of welcoming Professor Fabricius, the distinguished director of the *Limes* Commission, to Scotland, and acting as his guide to the Antonine Wall. Two years later he contributed to the Commission's Report an admirable synthesis of the results obtained on Roman British sites between the years 1914 and 1928. His paper embraced a wide survey of excavations, ranging from the legionary fortress at Caerleon and the Wall of Hadrian to the towers built on the headlands of the Yorkshire coast to guard against those pirate raids that with the weakening of the Roman power brought insecurity to the Province (*Forschungen im römischen Britannien 1914-1928*). The article was reprinted in English as a Supplemental Paper (No. VI) of the British Academy.

In 1926 he had been elected an Honorary Member of the Society of Antiquaries of Newcastle-upon-Tyne, and in the following year, on the formation of the Clayton Memorial Trust, he became one of the Trustees. The Trust had under its care the fine collection of inscribed stones and other relics gathered together from sites on Hadrian's Wall, and housed in the Museum at Chesters. The work of the Trust brought him closely into touch with a younger generation of archaeologists, keenly interested in working out the history of Hadrian's Wall, and who valued his co-

operation. It led in 1930 to his taking part in the decennial pilgrimage along the Wall and contributing his paper on *The Bath-house at the Fort of Chesters (Cilurnum)*, in which, aided by the knowledge he had gained of such buildings at Mumrills, he drew from the ruined walls a masterly reconstruction of a Roman bath.

The information gathered during more than twenty years was brought together in the second edition of his *Roman Wall in Scotland*, published in 1934. In its general plan the volume differed little from its predecessor; there was the same marshalling of all the available evidence, and the same clear logical deduction, but the material available had enormously increased. His surveys had borne fruit, and many new discoveries had been made. The sites of six more of the forts had been confirmed, and five of these had been investigated. Not only had he followed with untiring interest all work in progress, but at Mumrills, where he shared the direction of the excavation with Dr A. O. Curle, he had taken an active part, and at Croy Hill and Westerwood he had borne the sole responsibility. He had likewise himself cleared up many obscure points on the Wall as a whole.

In the years that had passed since he came to Bar Hill he had gained practical experience, and to his equipment as a scholar he had added that of a first-rate field archaeologist.

The Roman forts in Scotland, as indeed throughout Britain, have almost invariably shown signs of alteration and rebuilding, and no more difficult problem presents itself to the excavator than to extract from masses of disturbed wall-foundations or from post-holes the story of their vicissitudes. The plans of Mumrills, of Rough Castle, or of Croy Hill exhibit Macdonald's patient weighing of evidence, and his remarkable skill in interpreting a confused and difficult site. His acute powers of observation are shown in his revised survey of the Wall, for example by his discovery that east of the road leading northwards to Camelon the turf structure of the Wall was replaced by earth, with a stiffening of wrought clay; by his deduction that it here passed through forest land where turf was scarce, a tract of country that nourished the wolf, the red deer and the wild cat, whose presence was attested at Mumrills; or again by his interpretation of the distance slabs telling of the companies drawn from three legions digging the great ditch and building the Wall gradually working from the Forth to the Clyde, each performing its allotted task until the impenetrable basalt of Croy Hill upset their measured progress.

Admittedly the problems of the Antonine Wall were simpler than those of the German *Limes*. The period of occupation was much shorter than that of the Tyne and Solway barrier, nor did the remains present the same complexity of structure. But even allowing for these qualifications,

Macdonald's work must always remain a remarkable achievement, and it may safely be said that of all the frontier lines of the Roman Empire none have received within the compass of a single volume a presentation so scholarly and so complete.

In 1936 he contributed to these *Proceedings* "A Further Note on the Roman Fort at Croy Hill." The removal of an old cottage, which had encumbered the site in 1931, made it possible to search for interior buildings. The plan of the *Principia* and of one granary was recovered. He attained his results with what seems a minimum of effort. We can see with what reverence he approached the site, and his care that no stone should be disturbed unnecessarily, and that no foundations should be left uncovered to suffer irreparable destruction as at Inchtuthill and Rough Castle. An illustration in the text shows him in a characteristic attitude standing with the workmen on the snow-covered ground. Except for a visit to Bridgeness in the following year, it was the end of his work on the Antonine Wall.

In the autumn of 1937 his health began to fail. He suffered from an attack of asthma, after which symptoms of cardiac disorder began to show themselves and gradually more and more curtailed his activities. With characteristic courage and tenacity he continued to work, carrying on his wide correspondence and never relinquishing his grasp of the affairs of the Society or of the Royal Commission on Ancient Monuments. Notwithstanding increasing disability he continued his contributions to archaeological literature. His last paper read to the Society, "Miscellanea Romano-Caledonica II," written in 1939, brought him back to familiar ground. Among the contents is a final list of Roman coins found in Scotland, a note on the great marching-camp at Raedykes in Kincardineshire, and a critical examination of recent excavations at Birrens in which he vigorously sets aside the plea for a third-century occupation.

Though debarred from active work in the field, he followed with sympathetic interest the doings of others. Mr Richmond's skilful uncovering of the fort at Fendoch was a source of pleasure. Here for the first time, by the observation of post-holes and sleeper trenches, it had been possible to plan the wooden buildings of a Flavian fort, planted to hold a gateway to the Caledonian wilds. In the west, too, new sites were being discovered. In Annandale and Clydesdale roads were being traced; even in Ayrshire, at Loudon Hill, a fort had been discovered giving indications both of a Flavian and of an Antonine occupation. Did Agricola's campaigns after all lead him into the west? Did he reach the Ayrshire coast and look across the waters to that distant Hibernia that he would fain have added to his conquests? There were more chapters to be written in the history of the Roman occupation. The quest for which he had done so much must still go on. There was work for a younger generation.

In the summer of 1940, although he continued to work with undiminished mental vigour, it was clear to his friends that under the stress of his long illness, which he had borne uncomplainingly, his strength was failing. On the 9th of August a sudden seizure brought his life to an end.

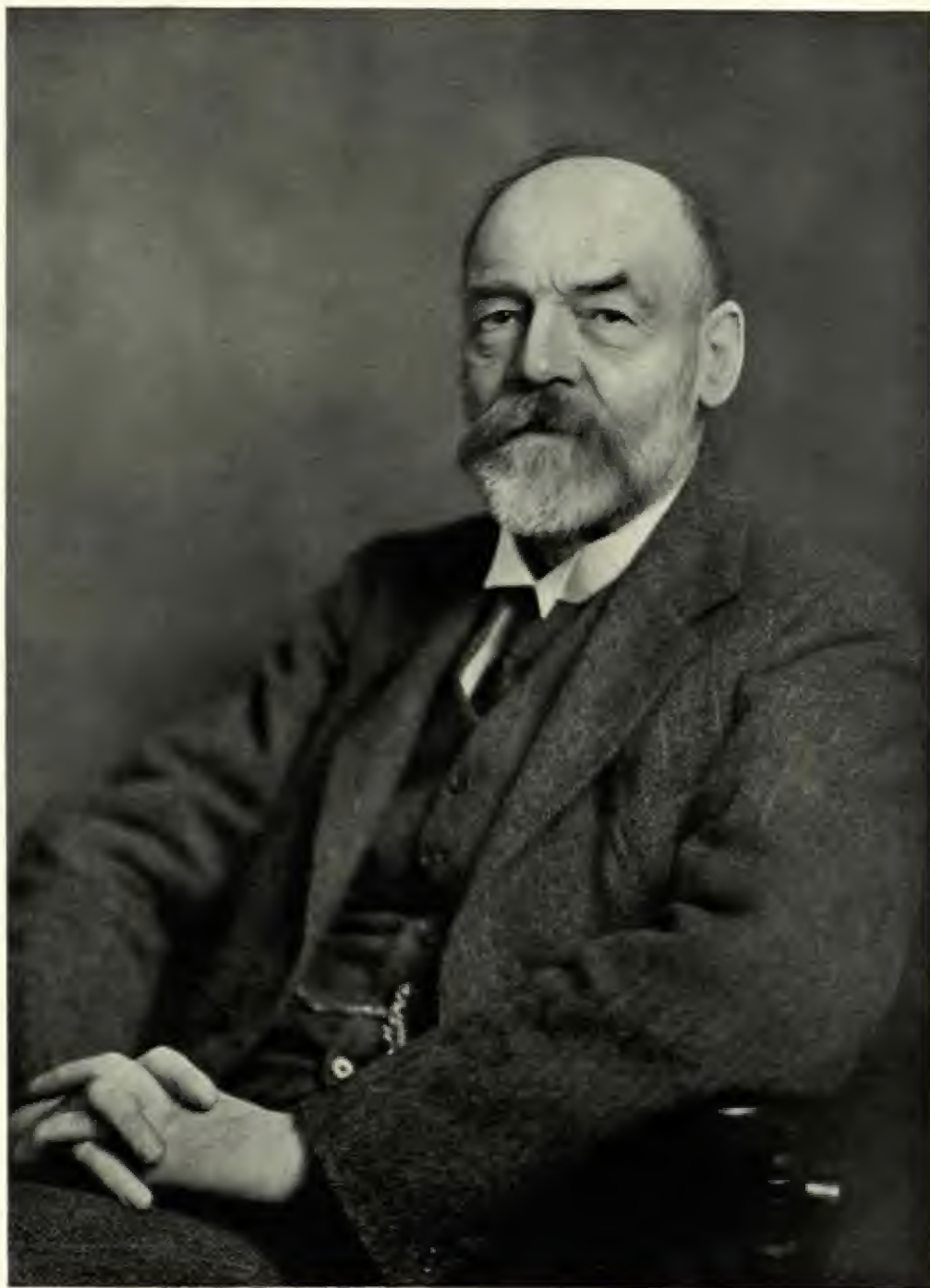
Many honours came to Macdonald in addition to those of which mention has already been made. He was created a Companion of the Bath in 1916, and a Knight Commander of the Bath in 1927, a fit recognition of his work in the public service. The Universities of Glasgow and Edinburgh conferred upon him their Honorary Degree of Doctor of Laws. From Oxford and from Cambridge he received the Honorary Degree of Doctor of Letters. He was a Fellow of the British Academy, an Honorary Fellow of Balliol and of the Royal Society of Edinburgh, an Honorary Member of the Royal Scottish Academy, and a Trustee for the National Library of Scotland. He joined the Society of Antiquaries of Scotland in 1900; served on the council and held the office of President from 1933 to his death. As President he entered wholeheartedly into the affairs of the Society. While his health permitted he was seldom absent from its meetings or failed to contribute to its papers or discussions. In 1936, and again in 1937, he enlivened the somewhat dull formality of its annual meeting by reviving the custom of a Presidential Address which had long been in abeyance. He was a member of the Society for the Promotion of Roman Studies from its beginning in 1911, and one of its first Vice-Presidents. As a member of the Editing Committee he took an active part in all its work and his contributions to it were important. He served as President for the years 1921-26. On the occasion of his seventieth birthday, in 1932, the annual volume of the Society's *Journal* was dedicated to him as a tribute to a distinguished scholar and in recognition of the work that he had done on behalf of historical knowledge. A bibliography of his writings was included.

From 1924 he had been a member of the Royal Commission on Ancient and Historical Monuments of Scotland. On the retirement of Sir Herbert Maxwell in 1934 he succeeded him as Chairman. The services that he rendered to the Commission were of great value. He had an unrivalled knowledge of the ways of Government Departments, and, what was still more important, he possessed the confidence of those in office. He threw himself heartily into the work of the Commission, writing and revising its reports, and watching its surveys in progress. In the summers of 1932, 1933 and 1935 he visited Shetland and Orkney, and took part in this work. Characteristic of the breadth of his interests are his papers on Shetland tombstones, among them the recumbent slabs at Lundawick in the island of Unst, with their epitaphs in Low German commemorating burgesses of Bremen who in the sixteenth century had plied their trade in the northern isles.

He occupied the post of President of the Classical Association (England and Wales), of the similar Association in Scotland, and of the Royal Numismatic Society. He presided over the Anthropological Section of the British Association at its meeting in Edinburgh in 1928. He was a member of the Royal Commission on Museums and Galleries 1927-29, and of the Standing Commission which carried on its work, as also of the University Grants Commission. He served on the Ancient Monuments Board for Scotland and on the Royal Fine Art Commission for Scotland. On the Continent, in addition to his honorary membership of many Numismatic Societies, he was a corresponding member of the Berlin Academy of Sciences, and a member of the German Archæological Institute.

George Macdonald was tall, though a scholar's stoop somewhat detracted from his height. While he did not convey the impression of great strength he was possessed of no inconsiderable powers of endurance. His memory was retentive. He left few notes behind him. He had the power of gathering his facts in his mind in an orderly fashion, and when he came to write, his prose was clear, direct and logical, requiring little alteration or revision. His insistence on sound evidence and his power of deducing therefrom every possible conclusion were characteristic of his work. He had read much, not only in the classics but in European literature, and his fund of knowledge was great. Around him there was a certain aura of shyness, and there were times when he seemed to retire into himself, but this was due in no small measure to partial deafness, which had affected him all his life. To a sympathetic listener he loved to talk and discuss the latest news of discoveries bearing on his favourite studies. He had a sense of humour which welled up quietly but which was none the less very genuine. He was a friend to all who came to him for help, and his good nature must have imposed on him many a burden of editing and of reading proof-sheets, which he seldom touched without adding clarity. He was very patient in giving help and in discussion, yet it could not be said that he suffered fools gladly. He did not seek controversy, but, being involved in it, the forces that he could deploy were formidable. On the many public bodies on which he served his wise, far-seeing outlook inevitably brought him to the front and made him a valued colleague. In whatever sphere he was engaged, he gave of his best. He was an industrious worker, and what he undertook he completed. He leaves behind him the memory of a great scholar, a man of calm and deliberate judgment, a wise friend, and the most accomplished Scottish antiquary of his generation.¹

¹ The Society is indebted to Messrs Emery Walker Ltd. for the block of PL. LIII and to the Society for the Promotion of Roman Studies for permitting its reproduction.



Geo: Macdonald
1932

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JAMES CURLE.

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NOTES.

1. REPORT ON A SHORT CIST AT COLDINGHAM, BERWICKSHIRE.

On 22nd February 1939 a short cist was revealed during the operations of a gyro-tiller in Applin Cross Field, Burnhall Farm, near the village of Coldingham, Berwickshire. The grave is located about 200 feet above sea-level on the north side of the valley between Coldingham and the sea. Measured from the top of Applin Cross Brae, it is 114 yards south-east from the public road to St Abb's. A few feet beyond the cist the field dips somewhat steeply. Two-thirds of a mile to the east lie Coldingham Sands.

The cover-slab, which lay about 14 inches below the surface, was smashed into small fragments by the revolving blades of the tiller, but, when the cist was examined on 25th February, the walls were found to be undamaged and in position. The contents, unfortunately, were disturbed before the find was reported. Careful riddling of the soil in and above the cist resulted in a considerable portion of a human skeleton being recovered. There were no traces of an urn, charcoal, or other relics.

The cist, which lies with its long axis N.N.E. and S.S.W., measures, internally, 3 feet 6 inches long, 1 foot 6 inches wide, and 2 feet 2 inches deep. The ends are composed of single thin slabs, the north-east end having behind it a second flat stone as a support. Each *side*, however, is constructed of *two* slabs, placed in line and neatly fitted. No clay luting was noted. The stones composing the south-east wall are 4 inches taller than those in the opposite wall, and the latter has been levelled up by means of two flat slabs, each 2 inches thick, laid horizontally one above the other, on the upper edge of the shorter stones. Among the soil, distinct from the broken cist-cover, several recently fractured pieces of another flat stone about 1 inch thick were observed. This stone may have formed part of the bottom of the cist. The cover-stone fragments vary in thickness from $3\frac{1}{2}$ to 4 inches. The stone of which the cist is constructed is a compacted fine shale, and resembles rocks at Linkum Beach, about a mile distant, in the vicinity of the "Deil's Dander."

Thanks are due to Mr James Bolton, Coldingham, who reported the find, and to Mr Thorburn, farmer, Burnhall, for permitting an examination of the site to be made. I am also indebted to Professor Alex. Low for his report on the skeletal remains.

PETER KENNEDY, F.S.A.Scot.

2. SKELETAL REMAINS FROM SHORT CIST, APPLIN CROSS FIELD, BURNHALL FARM, COLDINGHAM, BERWICKSHIRE. EXCAVATED 25TH FEBRUARY 1939.

While most of the bones are incomplete owing to decay, they are obviously the skeletal remains of a muscular adult male approximately 5 feet 6 inches in stature.

The skull is represented by pieces of a parietal, occipital, and temporal bone, and by an imperfect mandible, with molar and pre-molar teeth, the cusps of which show little attrition.

The other parts of skeleton present are: five fragmentary vertebræ; fairly complete right first rib with fragments of four other ribs; three pieces of a male pelvis; fragments of a left scapula and left clavicle; left humerus somewhat incomplete but approximately 310 mm. in length, the shaft of

which shows a good deal of torsion; the right humerus is imperfect; piece of right ulna; of the lower limbs the femora are represented, the right being fragmentary and the head of the left deficient, but an approximate length of the left would be 460 mm. and shows flattening of the shaft, *platymeria*; fragments of the other leg bones are also present.

ALEXANDER LOW.

3. A FRAGMENT OF ROMAN GLASSWARE FROM TEALING, ANGUS.

In 1939 Dr J. D. Gilruth acquired a number of objects said to have come from the earth house at Tealing, from the heirs of an old man who had been present at its excavation in 1871. The most interesting of these is a fragment of polychrome glass which Dr Gilruth has kindly presented to the Museum (see p. 150). It is not indeed mentioned among the objects enumerated by Andrew Jervise in his account, in the *Proceedings*, of the clearing out of the chamber in 1871.¹ The list, which is not very satisfactory, contains a number of articles dating from the Bronze Age to modern times. As, however, a piece of a decorated Sigillata bowl (now in the Museum) was found, there is little reason to doubt that the glass fragment came from the same place. It was sent to Mr W. A. Thorpe, Assistant Keeper, the Victoria and Albert Museum, who kindly sends the following report.

The fragment is part of the side of one of the ribbed, low, circular bowls of Roman date familiarly, though inaccurately, described by the nineteenth-century name of "pillar-moulded bowls." Bowls of this form, made to compete with a well-known shape in silver and other metals, have been widely found both in the Near East and in Europe (Italy, Rhine, N.E. France, Britain) as fragments or, less frequently, as entire vessels. They fall into two main groups:—

- (1) Bowls of highly translucent *ice-green* glass, which occur frequently, but vary considerably in technical quality;
- (2) Bowls of almost opaque polychrome murrine glass (*murrina*) which are either:
 - (a) assembled in a vessel *mosaic* of polychrome cane sections of a kind known sometimes by the Renaissance name of *millefiori*. Each cane slice (like "Edinburgh rock") is individually defined. Or
 - (b) made from such cane, but worked into an irregular *streaky* pattern.

All three types have been found in Britain, group (1) being quite common, group (2) (b) much less common, and group (2) (a) comparatively rare.

The Tealing fragment belongs to group (2) (b), the "streakies." Its three colours (cobalt-blue, opaque-white, and yellow) are typical. Like all the members of this group that I have seen, the outer ribbed surface is finished with fire-polish (*i.e.* slight surface fusion by what the trade call "warming-in"), while the inner surface is rotary-polished. The narrower end of the fragment is the top, and I suspect not much below the plain rotary-polished border which surrounds the outside of the rim above the tops of the ribs.

Murrina, in various Alexandrian and Latin forms of the word, appears to have been a loose trade name for polychrome glasses made from cane to undersell

¹ *Proceedings*, vol. x. pp. 287-292.

coloured stones, largely of the agate and chalcedony groups. High-grade glasswares, whether *murrina* or *crystallina*, were regularly classified for commercial purposes as stones (*cf.* λίθος χερή λιθία ἱαλῆ, etc.) at least until medieval times, and not always in ignorance. The murrine industry, long practised in Egypt in its sand-core types, became familiar in Italy, from mid 1st cent. B.C., from Alexandrian imports and otherwise, and in the course of late 1st B.C.–1st A.D. was brought by orientals to Italy, especially Campania (Surrentum region) and Rome, and possibly Aquileia. There is some reason for believing that it travelled, in the hands of orientals, to the Rhineland, especially Trier, but the mosaic types, being nearer to the Egyptian, can probably be regarded as Alexandrian exports, or at best Campanian. The "streakies" look more like derivative products made in Italy. Their discovery on service sites in Roman Britain (*e.g.* Caerleon) seems to favour Italy. As for date, the mosaic types, in Britain and generally, seem to be earlier in *range*, and largely late 1st B.C.–1st A.D., while the British-found streakies extend from mid 1st A.D. well into the second century.

The precise method of ribbing these bowls has been under discussion in the trade, and may not be always the same. There is, however, no question of blowing; but pressing, moulding, and possibly in some cases preliminary trailing. The cross-section of the Tealing rib shows that is done from cane.

Murrine types are illustrated by Kisa. D. B. Harden in *Karanis*¹ deals with late murrine in Egypt. Entire "streaky" bowls of Tealing type are illustrated in my *English Glass*, 1935, Plate I (from Berechurch, Essex, and from Silchester); and there are some notes on murrine in *Transactions of the Society of Glass Technology* (Sheffield), vol. 22 (1938). W. A. THORPE.

4. A SHORT CIST RECENTLY EXPOSED IN THE GALLOWES KNOWE, LINTRATHEN, ANGUS.

The Gallows Knowe is an obviously artificial mound about 45 yards in diameter and apparently between 12 and 15 feet high, about a quarter of a mile north-east of the parish church of Lintrathen, Angus. Some time between 1820 and 1830 the then tenant of Purgavie Farm dug out part of the soil of the tumulus for top-dressing and found some stone coffins, probably not more than two in number. They are said to have contained some bones, but no urn. Recently the tumulus has been made into an Observation Post. Early in December 1939 when men were digging turf for a shelter they came upon a stone cist. It was badly damaged before any examination could be made, but one of the workmen supplied the following information.

The cist lay to the east about half-way between the summit and the circumference of the mound and 1 to 1½ feet below the surface, being orientated roughly north and south. The cist measured about 4 feet long by 4 feet deep by 2 feet wide. The sides were each composed of two stones one above the other and the ends were similarly constructed, overlapping the sides slightly. The cover was very heavy and is said to have been derived from a quarry about a mile away. There was no floor slab. The interior was covered with reddish soil quite different from the black soil of the mound. At the south end of the cist was a sort of circular pavement, 6 to 9 inches in diameter, composed of white

¹ *University of Michigan Studies*, Hum. Ser. 41 (1936).

quartz pebbles. A small quantity of burnt bones much broken was found, but no trace of an urn.

In digging foundations for a shed on the south side of the mound, and going down some 4 feet into the earth of the tumulus, the workers noticed several layers of red earth similar to that which coated the floor of the cist.

WILLIAM FENTON, F.S.A.Scot.

5. RECENT EXCAVATIONS CARRIED OUT AT BORLAND CASTLE HILL, CUMNOCK, SOUTH Ayrshire.

Borland Castle hill is a large mound of sand and gravel, situated at a distance of 2 miles S.S.E. of the burgh of Old Cumnock between the L.M.S. railway line and the main road to the south. On the north and east sides of the hill is a shallow depression with a raised outer edge. The depression and raised edge have been mistaken for the fosse and rampart of a mote; but a narrow old road runs from the main road across Borland Burn up the slope towards the Castle hill, and it seems probable that the depression was formed when gravel was carted away from the site.

At the north-east corner of the present sand-pit, where the hill slopes down gently to the depression, the Rev. J. Douglas M'Clymont, B.D., F.S.A.Scot., The Manse, Old Cumnock, and Mr Allan Arthur, East Borland, Cumnock, discovered in 1938 three rim sherds and a shoulder sherd of a cinerary urn of gritty fabric at a depth of 1 foot 6 inches from turf-level above a layer of gravel consisting of rounded pebbles as large as peas, beneath which were found several large rounded boulders. Several fragments of charred wood and a few tiny pieces of broken burnt bone were found in the vicinity.

Twenty yards due south of the above site, along the east face of the sand-pit, was found a U-shaped hollow in the sand, filled to a depth of 6 feet with boulder clay. The excavation of this clay-filled hollow in a direction 60 degrees east of north was commenced by Mr M'Clymont, Mr Arthur and myself on Monday, 3rd October 1938, and the hollow was finally cleared in September 1939. The excavated pit was 12 feet long, with an average width of 4 feet. At a depth of 6 feet from turf-level was found a layer of rounded boulders of an average diameter of 1 foot. Beneath this layer was disclosed a layer of red ashes, surrounded by a margin of unconsumed oak charcoal and fine black earth, from 2 to 3 inches thick. This layer extended a distance of 10 feet 3 inches, with an average width of 3 feet. Among the ashes were found a few small fragments of incinerated bones, none of which exceeded half an inch in length. Beneath the layer of ash and charcoal was found a bed of flat stones from 1 to 2 inches in diameter, resting horizontally on the sand. The thinness and uniformity of the layer of charcoal and ash, its general shape and the scarcity of incinerated bones suggested to us that this was the site of a cremation. The direction would be favourable, being that of the prevailing winds. The incinerated bones must have been collected with care to leave so few fragments.

Along the face of the sand-pit, 20 feet north of this cremation site, at a depth of 18 inches from the turf-level, a rim sherd (2) of fine red Beaker was found projecting from the face by Mr Allan Arthur in autumn 1939.

During August 1939 our attention was drawn to a round patch of wet sand, 3 feet in diameter, on the floor of the sand-pit at the north-west corner. Mr J. D. M'Clymont and myself excavated this pit to a depth of 5 feet and found

that it was a cylindrical shaft, lined with thin red wood, containing short stakes and fragments of wood, one sole of a boot or shoe and animal bones, broken and decayed. Near the bottom of the shaft we found the lower part of the handle of a medieval jug of buff ware, described as No. 3 in Mr Edwards's report appended. This shaft was probably used as one of the kitchen-refuse dumps of Borland Castle.

ALEX. G. M'LEOD, M.A., F.S.A.Scot.

REPORT ON THE SHERDS.

The fragments collected by Mr M'Leod belong, as his report indicates, to three vessels and three periods.

1. Three rim sherds and a shoulder sherd of a cinerary urn of gritty fabric quite well smoothed externally and brown to light red in colour. Estimated rim diameter $10\frac{1}{2}$ inches. The urn has been of the overhanging-rim type, the collar bearing parallel horizontal and vertical lines in alternating panels. The neck had had a lightly traced criss-cross pattern made with the jagged end of a stick. Traces of the building-stages are clear, in particular a half-strip applied to the outside to form the lip.

2. A rim sherd of fine red Beaker, estimated rim diameter about 5 inches. It belongs to the B group, having apparently had an S-profile, and its decoration consisted of shallow incised lines running roughly parallel and horizontal.

3. Lower part of the handle of a medieval jug of buff ware. The handle had been $1\frac{1}{2}$ inch wide and $\frac{1}{2}$ inch thick. A single groove runs up the middle, at the bottom of which are two finger-tip depressions. The outer surface is coated with grey-green glaze covered with a brown friable film of decay.

A. J. H. EDWARDS, *Director*.

6. THE MARY QUEEN OF SCOTS PENDANT.

One of the most important and historically interesting additions to the collection of the National Museum of Antiquities of Scotland during the past year is a Renaissance Gold Pendant, the work of a sixteenth-century French goldsmith. The Pendant, which was purchased with the generous aid of the National Art-Collections Fund and His Grace the Duke of Hamilton, is a fine example of one of the decorative arts of the period, and was probably made for Mary Queen of Scots. It is oval in form, and in the middle the Arms of Scotland are seen through a crystal. In the centre is the shield of Scotland surrounded by the Collar of the Thistle with the badge, and supported by two unicorns. Above the shield is placed the royal helmet, thereon a crown, and issuing therefrom the crest, a lion sejant affronté crowned, holding a sword in the dexter paw, and, in the sinister, a sceptre; above is the legend "IN DEFENS" over the cipher "M.R." On the dexter side of the shield is a banner with the Royal Arms, and on the sinister side another with four bars, and over all a saltire. The metals and tinctures appear through the crystal on a field of blue. The outer enamelled border is linked to the central portion by eight small pellets, which have originally been covered with turquoise enamel. It is divided by four diamonds flanked by red enamelled rectangles into four zones, each of which is decorated on either side of a blue medallion with repeated gold scrolling designs on a black background outlined with white. The reverse is centred with an eight-petal flower-head between formal motifs framed

in white on a translucent red enamel ground, the border being similar to that on the front. On the outer edge beside the gem settings are four projecting scrolls, from the lowest of which depends a pear-shaped enamelled drop (Pl. LIV, 1).

A gold signet ring, formerly belonging to Mary Queen of Scots, with Arms similar to those on the Pendant, and with the heraldic tinctures appearing through the crystal on a field of blue, is in the possession of the British Museum.¹ It is thought to date to the decade between 1548 and 1558.

A. J. H. EDWARDS, *Director*.

7. A BROOCH FRAGMENT FROM FRESWICK LINKS, CAITHNESS.

In the summer of 1939, Mr Simon Bremner, a Corresponding Member of the Society, while walking over the links at Freswick, came across a heap of red ashes from which the covering sand had been blown away. In examining the heap, in which there was a large admixture of bones and shells, Mr Bremner found a portion of a small silver-gilt penannular brooch (Pl. LIV, 2) which he kindly sent to the Museum.

About half of the brooch remains. It had originally measured about $1\frac{1}{2}$ inch by 1 inch. The under side is flat and shows a few blowholes from the casting, also file marks where it had been cleaned after having been taken from the mould.

The upper surface of the ornament is partially gilt, and in the centre of the hoop is an oval sunk panel in which there had probably been an amber setting. Between the central portion and the terminal the hoop is traversed longitudinally by a moulding, in relief, running parallel to its flanged edges. The terminal is lozenge-shaped, with raised margins, and at the junction of the terminal with the hoop the edge expands so as to form a small hood. In the centre of the terminal is an amber setting, placed, in relief, within a circle divided into four segments by lines radiating from the setting to each corner of the terminal.

The brooch, in general, has a strong family resemblance to casts made from the moulds of two very similar specimens found at the Mote of Mark, Dalbeattie, by Dr A. O. Curle, C.V.O., LL.D., in 1913,² and probably dates to the end of the eighth or the beginning of the ninth century A.D.

A. J. H. EDWARDS.

8. SHORT CISTS IN THE PARISH OF INNERWICK, EAST LoTHIAN.

(a) THURSTON MAINS.

Towards the end of December 1939 a short cist was discovered during ploughing in a field called Langly at Thurston Mains, near Innerwick. An intact urn was taken out, as well as a flint knife and a number of bones in good condition. Mr D. C. Gregor, the tenant, thereupon informed the Museum authorities.

The farm lies among the low rounded hills that skirt the Lammermuirs, and is separated by one ridge from the flatter belt of land along the coast. The site of the grave is on a crest at about 480 feet O.D., and 400 yards south-west of the farmhouse. There is a steep drop 15 yards away on the south to the

¹ *Catalogue of the Finger Rings in the British Museum*, p. 53.

² *Proc. Soc. Ant. Scot.*, vol. xlviii, p. 144 (figs. 13, 14, No. 4).



1. The Mary Queen of Scots Pendant. (7.)



2. Fragment of Brooch from Freswick. (1.)

[To face page 138.



Sepulchral Vessels from Skateraw and Thurston Mains.



Reconstruction of the Burial at Innerwick.



Halberd from Asslich, Inverness-shire. (1.)



a



b



c

Skull No. 4 from Innerwick.

Thurston Mains Burn, while over the ridge to the north-east there is a view to the sea.

The cover stone, only 1 foot below the surface, was an irregular yellow slab with an undulating, smoothly pitted surface on both sides. It just covered the cist, leaving, however, a small gap in the N.W. corner. In the S.W. corner there was a small slab thrust between it and the side stones. The sides were made of six smooth slabs of flaggy yellow sandstone, 2-2½ inches thick. At the east end the north side slab made practically a right angle with the end slab, but the angle formed by the south slab was only 73°. The direction of the south side was 98° E. magnetic. The long side slabs ended 6 inches short of the

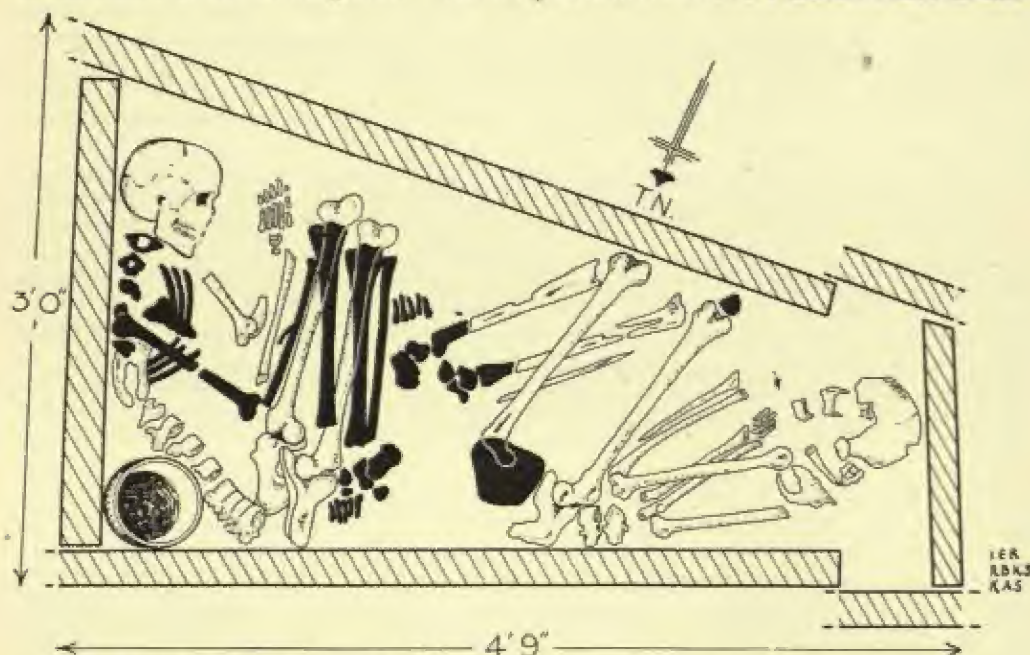


Fig. 1. Sketch plan of cist at Thurston Mains, showing the bones found *in situ* (black) and the conjectural position of the remainder.

west end slab, and on either side a slab had been placed in a line with and outside of the long slab, to extend the length of the cist. The interior dimensions of the cist were thus: east end 2 feet 6 inches, north side 4 feet 4 inches, south side 4 feet 5 inches, west end 1 foot 6 inches (breadth at 9 inches from the end 1 foot 3 inches). The height of the west slab was 1 foot 10 inches and of the main slab on the north side 2 feet 1 inch; but, as several lime-encrusted stones showed, the depth of the cist had only been about 1 foot 6 inches; apparently after the sides were erected some of the red excavated gravel had been replaced to provide a floor to the cist.

A large number of the bones (fig. 1) belonging to two individuals had been disturbed previous to examination, in particular a skull lying in the south-east corner facing roughly west (or more probably really south-west), and another, much more fragmentary, facing east, in the middle of the west end. There were, however, found to be still *in situ* a number of vertebrae, both tibiae, and a

fibula, calcaneus, right humerus, right ulna, sternum, and ribs of Skeleton I. The left clavicle lay under the right ulna. These were sufficient to show that it had been laid tightly contracted with the shoulders against the east end slab and the pelvis probably against the north side slab, in a rather twisted position on its left side with the chest half-turned upwards. The Beaker had been placed behind the small of the back in the north-east corner. Of Skeleton II there remained *in situ* only the left innominate bone, calcaneus and other bones of both feet, bits of tibiae, right patella, and a couple of hand bones. These seem to show that the body had been laid on the right side, and rather less tightly contracted than the other—probably owing to the lack of lateral space due to the narrowing of the cist towards the west. The feet were practically touching the shin of Skeleton I, the knees pretty close to the south side slab, and the back roughly parallel with the north side slab.

Professor Alex. Low has most kindly contributed a full report, with photographs, of the skeletal material, which is the remains of two young women, both under thirty-five years of age.

The relative positions of these two skeletons strongly suggest simultaneous burial; for neither encroaches on the other, and Skeleton I is tightly contracted and huddled close to the end as if to avoid Skeleton II. The lengthening of the west end is not evidence to the contrary, but is rather due to the inadequate size of the end slab. It is interesting to contrast the successive double burial, also with a Beaker, described in *Proceedings*, lxxiii. pp. 232 f.

The flint knife was found "about the middle of the cist." It is a flint flake $2\frac{1}{16}$ inches long with a maximum breadth of $\frac{3}{16}$ inch. The surface exhibits a mottled white and blue patina, except at the tip, where a considerable amount of cortex remains. The striking platform at the bulbar end had been carefully trimmed. There is secondary working along the whole of the upper side of one edge.

The Beaker (Pl. LV) is intact, except for a few cracks in the lower portion which suggest the proximity of structural joins. It has a typical smooth surface and reddish-brown colour, although the shade varies in patches from red to grey. The inside is a creamy-buff colour, and rather rough. The form places the vessel in the C₁ group, with short neck. The inside of the lip is a rounded bevel. The dimensions are: height $7\frac{3}{4}$ inches, rim diameter $5\frac{1}{2}$ inches, diameter at constriction $4\frac{1}{2}$ inches, at bulge $5\frac{1}{4}$ inches, base diameter 3 inches. The decoration has been executed in the notched technique. On the neck are four zones of decoration, each outlined with single horizontal lines above and below, viz. (from top to bottom) criss-cross, vertical zigzag with lengthened central stroke, vertical lines with chevron above and below, oblique dashes. The group terminates with a single line "feathered" along its lower side. On the bulge a zigzag, as above, is outlined above and below with three horizontal lines and a feathered edging. Above the base is a large three-, in places only two-, lined chevron, surmounted by three horizontal lines and a feathered edging.

The zigzag and feathered edging are motifs dealt with in Miss Mitchell's discussion of East Lothian Beakers,¹ while the oblique dashes occur on a Beaker from Thornton, Innerwick.²

Mrs Mitchell Innes and Mr James Hunter of Thurston House generously presented the cist and its contents to the National Collection, and the possibility of reconstructing it in the Museum as a permanent exhibit is under consideration. Unfortunately the severe frost disintegrated the slabs, before the reconstruction

¹ *Proc. Soc. Ant. Scot.*, vol. lxxviii. p. 139.

² *Ibid.*, vol. lxxviii. p. 319.

was projected. Thanks are also due to Mr Gregor for assistance in excavating the cist, as well as reporting its discovery.

(b) SKATERAW.

At the end of February 1939 a cist and urn were found on the farm of Skateraw, Innerwick, and reported in the *Berwickshire News* of 28th February. Inquiries were made as a result of this report, which was kindly sent to me by Mr P. Kennedy, F.S.A.Scot. Unfortunately the cist had been filled in by the time the site was visited in September.

The cist was situated on the crest of a low natural ridge, and there was no sign of a tumulus. It was beside the now uninhabited manse of Innerwick North (formerly U.F.) Church, about 5 yards on the east side of the hedge, immediately in front of the windows. To quote from the *Berwickshire News*: "The grave, which was less than 1 foot below the surface, was formed of four flagstones, and measured 4 feet long by $2\frac{1}{2}$ wide and about 2 feet in depth. They were beautifully fitted together and still true to the perpendicular." The report adds that some small limpet shells were adhering to the stones—the sea is about a mile away—and that the bones had mouldered into dust.

The urn (Pl. LV, 1) was later kindly sent for inspection to the Museum by Mr D. L. Bowe of Skateraw. It may be described as a late Beaker-Food Vessel hybrid. Its general form, but more particularly its rim, shows strong Food Vessel influence. For its bold, simple decoration we may, however, compare the undoubted Beakers from Aberdeenshire illustrated in Abercromby's *Bronze Age Pottery* (230, 231, cf. 262 from Angus), and the more doubtful vessels from Wiltshire (*ibid.*, Beakers, 33) and from Stonehenge (*Proceedings*, vol. lxx, pp. 357-8). The raised moulding around the outside of the rim may also represent a Beaker strain.

The vessel is rather roughly finished, and varies from light red to black in colour. The dimensions are: height $4\frac{1}{8}$ inches, rim diameter $4\frac{5}{8}$ inches, diameter at bulge $5\frac{1}{2}$ inches, at base $3\frac{1}{8}$ inches. The base splays out, and is very thick. There is hardly any neck above the constriction. The rim has a broad hollow bevel on the inside, with the lip obliquely nicked. Immediately below the lip, on the outside, is a raised rounded fillet, also obliquely nicked. The main decoration is roughly scored, and consists of large diamonds formed of bundles of four parallel oblique lines running across the whole of the body, starting from the raised fillet, to just above the basal cavetto.

R. B. K. STEVENSON.

REPORT ON THE SKELETAL REMAINS FROM THE CIST AT
THURSTON MAINS, INNERWICK.

Skeleton I (Pl. LVI).—This skeleton lay on its left side in a very contracted position with the skull at the south-east corner of the cist and the vertebral column bent forward. The lower extremities were much flexed, so that the knee joints approached the skull and the leg bones bent back to lie almost parallel with the thigh bones, the bones of the feet lying near the right hip bone. The position of the bones of the upper extremities shows that the right forearm was flexed.

The bones indicate a female of about thirty years of age and 5 feet 3 inches in height.

The skull (Pl. LVII) is relatively well preserved except for part of the left

face which has been in contact with the floor of the cist. The skull is light, thin walled, and small in size—cubic capacity 1430 c.c. of mustard seed. The muscular markings are feebly developed, the glabella and superciliary ridges slight, orbital margins fine, and mastoid processes small; evidently that of a female, and, further, the pelvic and other bones show female characteristics. Except for closure of the lower ends of the coronal sutures, all the sutures are open, including the metopic suture, and it can be inferred that the individual was about thirty years of age.

The skull, viewed from above (Pl. LVII, c), is broadly ovoid, and is brachycephalic with a length-breadth index of 81.5. The maximum breadth is at the level of the parietal eminences, which are well marked and high up. The view from behind shows a distinct sagittal elevation, and below the parietal eminences the sides of the cranium are flattened, giving an "ill-filled" appearance.

The profile view (Pl. LVII, a) shows a short, relatively high skull with slight superciliary ridges, and the frontal ascending with a uniform high curve. The vertex is flattened, and the posterior curve passes sharply down, so that there is practically no projection of the occipital pole—planoccipital.

The face (Pl. LVII, b) is of medium height, relatively broad and orthognathous with a certain degree of subnasal prognathism—gnathic index 95.8. The orbits are narrow, and the nasal aperture rather broad. The jaws are well developed, with wide palate and dental arches, the angles of the lower jaw are prominent and the chin rounded. There has been a complete set of permanent teeth, though some have dropped out after death. The teeth present are well developed, and, while the molars show some attrition, there is no trace of caries or evidence of infective processes.

Bones of the Trunk and Limbs.—The vertebral column is represented by the atlas and four fairly complete cervical vertebrae, four fragmentary upper thoracic and six lower thoracic, a first lumbar and fragmentary fifth lumbar vertebrae.

Part of the first piece and most of the body of the sternum is preserved, as also twelve very imperfect ribs; the two scapulae and left clavicle are fragmentary. The humeri are incomplete: of the right there are three pieces, including the lower articular surface; and of the left, the lower three-fourths of shaft with its articular surface. Of the forearm bones the right radius and ulna are complete and the upper fourth of the left ulna. Of the right hand there are three carpals, all five metacarpals, and six phalanges.

The sacrum and innominate bones, while fragmentary, show certain features of interest; the auricular surfaces are short and broad, the pre-auricular sulcus is well marked and the sciatic notch is broad and shallow—characteristics of a female pelvis.

The femora are fairly complete except for some erosion; they show a high grade of *platymeria*—flattening of the upper third of the shaft; the angle of torsion is greater than the average angle in modern bones. The tibiae are in a fair state of preservation, both bones show *platynemia* and torsion of the shafts. The right fibula is almost complete; of the right foot there remains the talus, calcaneum, cuboid, navicular, medial cuneiform, and five metatarsals somewhat fragmentary; of the left, talus and calcaneum.

Skeleton II (Pl. LVI).—This skeleton had lain in a contracted position on its right side with thighs flexed and knees bent, so that the feet were in apposition with the feet of Skeleton No. 1.

This is the skeleton of a female thirty to thirty-five years of age and 5 feet 2 inches in height.

The skull is very fragmentary and is represented by a fairly complete frontal bone articulating with a left parietal, part of occipital bone, left orbital margin, upper left alveolar process and symphysis of lower jaw. The sutures of vault are open except for the lower inch of coronal suture. Muscular markings poorly developed and left orbital margins fine, and this along with the characteristics of the pelvic bones indicate that the sex is female.

Bones of the Trunk and Limbs.—A well-developed axis, three lumbar vertebrae, and an imperfect sacrum are all that remain of the vertebral column; there are three fragmentary ribs, a fragment of left scapula, and the sternal half of a right clavicle.

While the left humerus is intact, the head of the right has been broken off. Of the forearm bones the lower half of right radius is intact, the left radius and the right and left ulnae are complete, and there are four imperfect metacarpals of the left hand.

Pelvis is imperfect and is represented by the upper half of the sacrum and two fragmentary innominate bones showing preauricular sulci and wide and shallow sciatic notches, characteristics which suggest a female pelvis.

TABLE I.

*Measurements in mm. of Skull from Beaker Interment
at Thurston Mains, Innerwick.*

Skeleton I.

Sex	Female	Indices.
Cubic capacity (in c.c.)	1430	
Glabello-occipital length	178	Cranial 81.5
Maximum breadth	145	Length-height 75.3
Maximum frontal breadth	132	Breadth-height 92.4
Minimum frontal breadth	101	Gnathic 95.8
Biauricular breadth	125	Upper facial 52.0
Basi-bregmatic height	134	Total facial 88.8
Auricular height	105	Nasal 50.0
Basi-nasal length	95	Orbital, R. 76.9
Basi-alveolar length	91 ap.	Maxillo-alveolar 120.0
Nasi-alveolar height	65 ap.	
Nasi-mental height	111	
External frontal breadth	108	<i>Mandible.</i>
Bizygomatic breadth	125 ap.	Condyle-symph. length. 91
Nasal height	48	Height at symphysis 31
Nasal breadth	24	Height at second molar 30
Orbital height, R.	30	Height: coronoid. 58
Orbital breadth, R.	39	Height: condyle 62
Maxillo-alveolar length	50 ap.	Bicondylar breadth 118 ap.
Maxillo-alveolar breadth	60	Bigonial breadth 94 ap.
Sagittal arc, frontal	137	Minimum breadth, ramus 30
„ „ parietal	137	
„ „ occipital	112	
	386	<i>Indices.</i>
Length foramen magnum	33	Breadth 79.6
Transverse arc	313	Mandibular 77.1
Horizontal circumference	520	

TABLE II.

*Measurements in mm. of Bones of Extremities from Beaker Interment
at Thurston Mains, Innerwick.*

	Skeleton I.		Skeleton II.	
	R.	L.	R.	L.
Humerus:				
Maximum length . . . . .	..	..	..	316
Radius	218	..	..	239
Ulna	248	..	265	265
Femur:				
Maximum length	448	450	436	434 ap.
Oblique length	442	440	427	426 ap.
Upper third of shaft:				
Ant. post. diam.	22	24	25	..
Trans. diam.	33	34	32	..
<i>Platymeric index</i>	66.7	70.6	78.1	..
Middle of shaft:				
Ant. post. diam.	25	26	26	26
Trans. diam.	25	25	23	23
<i>Pilasteric index</i>	100.0	104.0	113.0	113.0
Angle of neck	103°	105°	105°	..
Angle of torsion . . . . .	..	45°	28°	..
Tibia:				
Maximum length	337	335 ap.	..	..
Ant. post. diam.	33	34	..	..
Trans. diam.	23	24	..	..
<i>Platynemic index</i>	69.7	70.6	..	..
Angle of torsion	27°	29°	..	..
Fibula	333 ap.	..	..	..
Talus:				
Length.	50	50	49 ap.	..
Breadth	37	38	37	..
Calcaneum:				
Length.	74	74	73	..
Breadth	37	38	37	..

Indices.

	Skeleton I.		Skeleton II.	
	R.	L.	R.	L.
Radio-humeral . . . . .	..	..	..	75.6
Humero-femoral . . . . .	..	..	..	72.8
Tibio-femoral	75.2	74.4	..	..
Stature as calculated from long bones	5 feet 3 inches		5 feet 2 inches	

The femora are fairly complete and show *platymeria* and torsion; there is also a right patella; both tibiae are very fragmentary; the right fibula is fragmentary, while the left is broken at its lower fifth. There are the talus and calcaneum of the right foot, and of the left foot imperfect talus and calcaneum, cuboid, navicular, medial cuneiform, and five fragmentary metatarsals.

The bones of the lower limbs of these skeletons display certain features in which they differ from modern bones. In the femur the angle of torsion is large, and associated with this there is bowing of the shaft and flattening below the trochanters—*platymeria*. In the tibia the angle of torsion is also well marked, the shaft flattened from side to side—*platynemia*, and there is a "squatting" facet on the anterior border of the lower articular surface. In the talus the axis of the neck forms a distinct angle with the sagittal plane, associated with inversion of the head. These various characteristics give us a clue to the manner of life our ancestors led—the bones have been moulded in response to vigorous, agile, open-air life.

ALEX. LOW.

9. CISTS NEAR TWEEDSMUIR.

In the middle of September 1939 a few loose bones led to the recognition of a cist which protruded at the edge of a knoll of terrace gravel above the flood-plain of the Tweed, 100 yards S.E. from Polmood Post Office, near Tweedsmuir, Peeblesshire, and just beside the main road to Moffat and the South. It proved to be a long cist of the type frequently found, particularly along the East Coast, and generally thought to be Early Medieval. The interest of this example is its occurrence in the heart of the southern uplands.

Mr Wilson, who lives at the Post Office nearby, informed Dr W. S. Crockett of Tweedsmuir, who kindly communicated with the Museum. To both thanks are also particularly due for having left the cist undisturbed pending fuller examination.

The grave sloped up toward the head, which was towards the south-west. There were three slabs along each of the long sides, with an extra slab outside the south-east. The south-west end slab was the highest of all, its top being 1 foot 4 inches above the bottom of the grave. The stone closing the north-east end had been lost owing to the exposure, and possibly there may have been a further couple of side stones at that end. The width varied from 1 foot to 1 foot 6 inches. There were four cover stones, about 10 inches below the present surface of the ground, one of which was no longer *in situ*. The cist was floored with six closely laid slabs, giving a length of almost 6 feet. A photograph was published in the *Scotsman*, 5th October 1939. The skeletal remains were very fragmentary, but Professor Low has kindly reported that they are probably those of a well-developed male of about 40 or 45 years of age. The collar bones, upper and lower parts of the back bone, some ribs, parts of the pelvis, head of the right femur, and the left shin bone lay undisturbed under an inch or so of earth, and showed that the body had been laid at full length on its back. Further, the right arm had been extended along the side and bits of the left lower arm survived to show that the left hand had lain in the lap. The skull had rolled down and lay on top of the right elbow, probably owing to disturbance by rodents. A fragment of what appeared to be cinder underlay the pelvis, and a few other fragments of the same material occurred in the cist.

While at Polmood I heard that a grave had been found some years ago at Woodend, Mossfennan. The fairly massive cover of a short cist is still visible

in a large artificially rounded mound on the edge of the flood-plain, 50 yards down the valley, and on the opposite side of the road, from the cottage of Woodend (Mr Moir). Several other similar burials, apparently in less well-constructed cists, had been found in the same mound. In the distance could be seen the mound on the other side of the Tweed nearer Drumelzier that was excavated by the late Mr J. H. Craw (*Proc. Soc. Ant. Scot.*, vol. lxxv, pp. 263 ff.).

R. B. K. STEVENSON.

10. NOTICE OF A LONG CIST, MIDDLETON, FRIOCKHEIM.

In March 1940 Mr Maclellan, overseer on Capt. Bruce Gardyne's estate of Middleton, near Friockheim, examined the remains of a long cist disturbed during the ploughing, under the grasslands scheme, of a gravel and sand knoll 800 yards W.N.W. from Middleton House. On the north side of the knoll, which had probably once overlooked marshy ground, were a number of slabs split from boulders of freestone, some projecting above the surface before the ploughing. These formed a grave in which were recognisable the skull and arm bone of an adult. Two end stones were about 6 feet apart. Two other stones also remained, about 2 feet apart, one on either side of the shoulders, at the west end.

Mr Maclellan removed the stones and reburied the bones, and also informed our Fellow Mr J. P. Watson, who promptly notified the Museum. When I visited the site Mr Maclellan's description was sufficient to establish the character of the discovery.

R. B. K. STEVENSON.

DONATIONS TO AND PURCHASES FOR THE MUSEUM, 1939-40.

Donations.

(1) Relics found during excavations carried out at Castle Sween, Knapdale, Argyll; Carved Ball of igneous rock, having six knobs, $2\frac{7}{8}$ inches in diameter, found on pavement floor between the south-west wall of the courtyard and the square west tower. Three penannular Brooches of bronze: (1) with rough incised pattern of chevrons filled with groups of straight lines, the pin missing, $3\frac{1}{16}$ inches in diameter; (2) portion only, the pattern composed of three loosely interlaced double strands on a hatched ground, estimated diameter $3\frac{1}{2}$ inches; (3) pin missing, $1\frac{9}{16}$ inch in diameter, with traces of Gothic lettering. Joiner's Shell-bit of iron. A Quarrel-head of iron and a Hammer-head of iron with a rectangular perforation. Presented by THE COMMISSIONERS OF HIS MAJESTY'S WORKS.

(2) Objects recovered during excavations carried out by The Commissioners of His Majesty's Works, and presented by the proprietors:

Iron blade of kidney-hafted Dagger, $9\frac{3}{8}$ inches in length. Iron Chisel with flat triangular expansion at lower end, $7\frac{3}{4}$ inches in length. Brass Stopper, 3 inches long, consisting of a disc, 1 inch in diameter, with milled edge, having a knob on one side and, on the other, a tube cut to form a scoop. Four Cannon-balls, $3\frac{1}{2}$, $3\frac{1}{8}$, $2\frac{1}{16}$, and 2 inches in diameter respectively, from Dirleton Castle, East Lothian. Presented by Lt.-Col. J. P. NISBET HAMILTON GRANT, D.S.O., Biel, Dunbar.

Playing-man of bone, fifteenth or sixteenth century, $1\frac{5}{16}$ inch in diameter, $\frac{5}{16}$ inch in thickness, with concentric circles and dot-and-circle patterns incised, the centre pierced roughly. Small Die of bone, a cube measuring $\frac{5}{16}$ inch. Finger-ring of bronze, $\frac{3}{4}$ inch in diameter, $\frac{3}{16}$ inch in thickness, having a rough pattern of three lines and short cross-lines, ending in a cross, on either side of the bezel, which is missing. Two iron Keys, $9\frac{1}{16}$ inches long. Axe-head of iron, the top 6 inches long, the lower edge flared, from $1\frac{1}{8}$ inch to $2\frac{3}{4}$ inches in width, from Tantallon Castle, East Lothian. Presented by The Hon. Sir HEW H. DALRYMPLE, Bart., K.C.V.O., F.S.A.Scot.

Fragments of lead-glazed Flooring-tiles from The Abbey, North Berwick. (See *Proceedings*, vol. lxi. pp. 281-4 and 297-304.) Presented by Colonel GUY SPIER, The Abbey, North Berwick.

Bronze Jetton, found in the floor of the tower at Duffus Castle, Morayshire. Presented by Sir ARCHIBALD E. DUNBAR, Bart., Duffus House, Elgin.

Crosraguel Penny, found in the floor of the stable building adjoining Crichton Castle, and an iron Knife, having bone handle, 3 inches long,

which has a small round piece, with a tiny knob in the centre, inserted as a stopper. The knife was recovered at Crichton Castle, Midlothian. Presented by Major W. H. CALLANDER of Prestonhall.

Portion of Oak Cresting, pierced work, late fifteenth-century Gothic, 8 inches in height, found at Deer Abbey, Aberdeenshire. Presented by THE TRUSTEES OF THE FINANCES OF THE ROMAN CATHOLIC DIOCESE OF ABERDEEN.

Relics recovered during excavations on Traprain Law. Presented by The Rt. Hon. VISCOUNT TRAPRAIN. (See Report by Stewart H. Cruden, A.R.I.B.A., pp. 48-59.)

Objects from the Mint at Crosraguel Abbey, discovered during the clearing out of a drain. (See *Proceedings*, vol. liv, pp. 20-44.) Presented by THE DEANS OF THE CHAPEL ROYAL.

More than half of a shallow Dish of grey pottery which had been coated with green lead glaze, late sixteenth century, and three Draughtsmen of bone, found on the basement floor of the "Hamilton Tower," Bothwell Castle, May 1937. Presented by The Right Hon. THE EARL OF HOME, K.T.

Relics from Cubbie Roo's Castle, Orkney: annular Brooch of thin sheet bronze decorated on its upper surface with three concentric rings of imitation cable pattern; brass Jetton, $\frac{5}{8}$ inch in diameter; part of a bronze Tag, triangular, with scalloped edge; small trowel-shaped Ornament of bronze, with tang; part of a small ornamental spherical Ball of bronze; several miscellaneous fragments of bronze; piece of flagstone with a shallow moulding on one side; part of a clay Mould, the bottom flat, the sides sloping and with oblique grooves; fragment of fired clay with two depressions on the black side, possibly part of a mould; small piece of micaceous claystone with, possibly artificial, grooves and hollows; part of a small Crucible and two fragments of a larger one; pottery fragments. Presented by JAMES W. FLAWS, Castlehall, Wyre, Orkney.

(3) Bone Pin, $2\frac{1}{2}$ inches long, the head a clenched fist with cable pattern below, the point broken off and roughly sharpened, found at Burleigh Castle. Presented by Captain P. RUSSELL MONTGOMERY, Kinross House.

(4) Bronze Tweezers, $1\frac{3}{4}$ inch long, being a strip of metal, $\frac{7}{32}$ inch broad, with a groove near each edge, found in a (?) kitchen-midden in the sand dunes, $\frac{1}{4}$ mile east of Castletown, Caithness. Presented by H. K. CLAUSEN, 19 Blinkbonny Gardens, Edinburgh.

(5) Relics recovered during the excavation of a Stone Age Settlement at the Braes of Rinyo, Rousay, Orkney, in 1938. Presented by WALTER G. GRANT of Trumland, F.S.A.Scot. (See *Proceedings*, vol. lxxiii, p. 6.)

(6) Ladle, probably of beechwood, used in the process of brewing ale, found near Preston Tower, Prestonpans, East Lothian. Presented by G. W. CALVERT, Ivy Bank, Haddington.

(7) Pendant, slate, $2\frac{3}{8}$ inches long, with dot-and-circle patterns, found in a field between Wigtown and Newton Stewart. Presented by W. McDONALD, 40 Grant Street, Glasgow.

(8) Axe-head, iron, $6\frac{3}{4}$ inches long, found in the Forest at Knapdale, Argyll; Tally Stick, Scots pine, $29\frac{1}{2}$ inches in length, found in an old drain in Inshriach Forest, Glenmore, Inverness-shire. Presented by H.M. FORESTRY COMMISSIONERS (SCOTLAND).

(9) Communion Token of Cumlodden Parish. Presented by Miss MACKICHAN, 28 Strathearn Road, Edinburgh.

(10) Gold Mourning Ring, inscribed G: C/CRAWFIRD/OB 18/JUNE: 1748/AE: 23. Presented by Mrs THEODORE MARSHALL, 4 South Learmonth Gardens, Edinburgh.

(11) Gold Mourning Ring, inscribed SI^S L^D LOVAT/BE^D 9/APR 1747/AE 80, and, inside, DULCE ET DECORUM EST PRO PATRIA MORI. Presented by THOMAS YULE, W.S., F.S.A.Scot.

(12) Collection of 336 Communion Tokens and a Beggar's Badge of lead, inscribed NO. 24 CROY 1742. Bequeathed by Mrs McCONACHIE, Cottesbrook, Lauder.

(13) Four Communion Tokens. Presented by Mrs WESTON, Whitelea, Selborne Road, Croydon.

(14) Bronze socketed Axe-head, looped, and part of another, and a bronze Palstave, found at Wester Golcantry "in the Tailor's Garden," in 1887; Halberd blade, O'Riordain's type 6, found at Asslich, near Drumna-drochit, Inverness-shire, probably about 1887 (Pl. LVI, 2); hollow based flint Arrow-head, and another barbed and tanged, found on Cantraydoune, 1875; flint Knife, $2\frac{3}{8}$ inches long, probably found with the arrow-heads. All formerly in the possession of Miss May Davidson of Clava and Cantray, Inverness-shire. Presented by ALEXANDER KEILLER, F.S.A.Scot.

(15) Three sherds of large undecorated Pots, found in the "Homestead" on Arksfarm, by Lawsyke, Roxburghshire; portion of a bronze dragonesque Fibula, found at Edgerston Camp. Presented by Mrs OLIVER of Edgerston, F.S.A.Scot.

(16) Relics from Iron Age dwellings on the Calf of Eday, Orkney. (See *Proceedings*, vol. lxxiii. pp. 167-185.) Presented by the late Major HARRY H. HEBDEN, M.C., Eday, Orkney.

(17) Steep End-scraper of jasper, from the blown sands, Aikerness, Evie, Orkney. Presented by JAMES S. RICHARDSON, F.S.A.Scot.

(18) Relics from the Agricolan Fort at Fendoch. (See *Proceedings*, vol. lxxiii. pp. 110-154.) Presented by Captain J. DRUMMOND MORAY, Abercairney.

(19) Oak Door from Mary of Guise's house, Lawnmarket, the panels carved. Presented by RICHARD J. SIMPSON, F.S.A.Scot.

(20) Relics from excavations outside the Roman Fort at Mumrills.

(See *Proceedings*, vol. lxxiii. pp. 319-324.) Presented by CHARLES W. FORBES of Callendar, J.P., D.L.

(21) Crimean Medal, silver, with ribbon and clasps of Alma, Balaklava, and Sebastopol, which belonged to Private T. A. McLeod of the 42nd Regiment. Presented by Miss A. SCOTT, 20 Maedowall Road, Edinburgh.

(22) Bronze Terret; indeterminate object of bronze; jet Ring; Cup of lead; quartz Pebble with artificially straightened side; segment of a jet Ring; found at the Fort at Cairngryffe, Lanarkshire. (See *Proceedings*, vol. lxxv.) Presented by THE COUNTY COUNCIL OF LANARK.

(23) Stone Object, pecked and grooved, found in the "Bunzie Hoose," Pettigarthsfield, Whalsay, Shetland. Presented by JOHN STEWART, 146 Seafield Road, Aberdeen.

(24) Gold-mounted Vinaigrette. Bequeathed by Mrs ANNA MARSHALL of 4 South Learmonth Gardens, Edinburgh.

(25) Brass Badge of the Plumbers' Association, made in celebration of the passing of the Franchise Act, 1884. Presented by R. N. DE PINTO, F.S.A.Scot.

(26) Collection of Weapons, etc., including Highland broadswords, dirks, guns, pistols, powder-horns, sporrans, circular brooches of brass and silver, also Luckenbooth brooches of various types and a number of obsolete tools used by gunmakers in the eighteenth and nineteenth centuries (Pl. LVIII). Bequeathed by CHARLES E. WHITELAW, F.S.A.Scot.

(27) A two-handled silver Quaich, made in Edinburgh, 1737-38. Bequeathed by JOHN RICHARDSON, F.S.A.Scot.

(28) Beaker Urn and Knife from a Cist at Thurston Mains, Innerwick, Haddingtonshire. Presented by Mr and Mrs ROBERT HUNTER through the trustees, Messrs J. & F. Anderson. (See Notes, p. 139.)

(29) Portion of a Roman glass Bowl from the earth-house, Tealing, Angus. Presented by the late Dr J. D. GILRUTH, F.S.A.Scot. (See Notes, p. 134.)

(30) Eleven Communion Tokens. Presented by the late Miss J. C. C. MACDONALD.

(31) Ninety Communion Tokens from the Collection of The Rev. David Paul, Edinburgh. Presented by Mr A. S. PAUL, Johannesburg.

(32) Two Charms or Amulets which had belonged to Lady John Scott, and an iconographic Ring, silver-gilt, fifteenth century, found at Hume Castle, Berwickshire, during the lifetime of Sir Hugh Hume Campbell, grandfather of the donor. Presented by Miss ELEANOR WARRENDER, High Grove, Ruislip, Middlesex.

(33) Bone-cased Pocket-knife, inscribed M^R JOHN CAMERON. The Rev. John Cameron was minister of Kincardine-in-Menteith, and, being a non-juror, was evicted in 1689. Bequeathed by Miss FANNY M. CAMERON.



Pair of Pistols of Brass. On the barrels is a panel containing two shields bearing respectively the arms of France and Navarre surmounted by a crown and the inscription LOUIS XIII ROY DE FRANCE.

The maker was probably James Low, gunmaker, admitted freeman of the Incorporation of Hammermen of Dundee in 1583, as they are signed and dated on locks and barrels IL 1611. Length, 13½ inches; Bore, ½ inch.

[Bequeathed by Charles E. Whitelaw, F.S.A.Scot.



Misericord seats of oak from choir stalls, and said to be from the north-east of Scotland. Late fifteenth or early sixteenth century,

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(34) Flint Graver, $1\frac{1}{2}$ inch long (see *Proceedings*, vol. lxxii. p. 185, fig. 1, No. 2), and four small fragments of thin beaker ware, from Shewalton Moor, Ayrshire. Presented by A. D. LACAILLE, F.S.A.Scot.

Purchases.

(1) Tanged and barbed Arrowhead of quartz, the tip of one barb broken, found at Cross Common Pasture, 24 miles north of Stornoway.

(2) The Mary Queen of Scots Pendant. Purchased with generous aid from the National Art-Collections Fund and from His Grace the Duke of Hamilton. (See Notes, p. 137.)

(3) Portion (nearly half) of a penannular Brooch of silver, the upper surface gilt, most of which still remains. Found in a heap of red ashes near the centre of the links at Freswick, Caithness. (See Note, p. 138.)

(4) Collection of Implements of flint, chert, jasper, and pitchstone, also a fragment of pottery found at blown sands, Aikerness, Evie, Orkney.

(5) Plain bronze annular Brooch, diameter $1\frac{1}{16}$ inch, of circular cross-section, $\frac{1}{8}$ inch in diameter; plain bronze annular Brooch, $\frac{27}{32}$ inch in diameter, of circular cross-section, $\frac{1}{16}$ inch in diameter; domical bronze Mounting with octagonal edge, $\frac{15}{16}$ inch across, tinned on upper surface, originally fastened by two iron pins; globular Bead of translucent pearly glass, diameter $\frac{5}{8}$ inch; globular paste Bead, coloured silver, diameter $\frac{7}{16}$ inch. Found at the north end of Freswick Links.

(6) Three Misericord Seats of oak from choir stalls, and said to be from the north-east of Scotland, having come from the Gordon Castle Sale, Late fifteenth or early sixteenth century. (Pl. LIX.)

(7) Heavy Demi-Lion of Robert III., found at Melrose Abbey. Acquired through The King's and Lord Treasurer's Remembrancer.

DONATIONS TO AND PURCHASES FOR THE LIBRARY, 1939-40.

Donations.

(1) Calendar of State Papers. Colonial Series. America and West Indies. 1732 and 1733. London, 1939.

Calendar of the Fine Rolls. Vols. xviii. and xix. Henry VI. A.D. 1445-52 and 1452-61. London, 1939.

Calendar of Treasury Books. January 1704-March 1705. Vol. xix. London, 1938.

Calendar of the Patent Rolls. Philip and Mary. Vol. iv. 1557-58. Elizabeth. Vol. i. 1558-60. London, 1939.

Presented by HIS MAJESTY'S GOVERNMENT.

(2) Ancient Monuments of Great Britain. List of Monuments (to 31st December 1938) prepared by the Commissioners of Works. London, 1939. Presented by THE FIRST COMMISSIONER OF HIS MAJESTY'S WORKS AND PUBLIC BUILDINGS.

(3) Kanovium Excavation Committee. Excavations on the Site of the Roman Fort of Kanovium at Caerhun, Caernarvonshire. By P. K. Baillie Reynolds, M.A., F.S.A. Cardiff, 1938.

Preliminary Report upon the Excavations carried out in and near The Hippodrome of Constantinople, in 1927, on behalf of The British Academy. London, 1928. Second Report, London, 1929.

Michael Scot: A Scottish Pioneer of Science. By John Read. Extract from *Scientia*. Oct.-Nov. 1938.

Dura-Europos and its Arts. By M. Rostovtzeff. Oxford, 1938.

Excavations at Dura-Europos. Preliminary Report of the Seventh and Eighth Seasons of Work, 1933-34 and 1934-35. New Haven, 1939.

The Sator-Formula and the Beginnings of Christianity. By Donald Atkinson, M.A. Reprinted from the *Bulletin of the John Rylands Library*, vol. 22, No. 2, October 1938.

The Original Significance of the Inscriptions on Ancient Coins. By the Donor. Reprint.

Observations on the Province of Cilicia. By Ronald Syme. Reprinted from *Anatolian Studies* presented to William Hepburn Buckler. 1939.

The Malay Coins of Malacca. By C. H. Dakers, M.C.S. Reprint from *Journal*, vol. xvii. part 1, 1939. Malayan Branch, Royal Asiatic Society.

L'Archêveché de Pédachtoé et le Sacrifice du Faon. By Franz Cumont. Reprint from *Byzantion*, 1931.

Alchemy under James IV. of Scotland. By John Read, Ph.D., Sc.D. Reprint from *Ambix*, vol. ii., 1938.

Der Burgwall von Lossow, Kreis Lebus. By W. Unverzagt. Reprint from *Congressus Secundus Archaeologorum Balticorum*. Riga, 1930.

Die Römer als Nachahmer im Landwehr und Lagerbau. By C. Schuchardt. Reprint. Berlin, 1931.

Serta Leodiensia. Inscriptions et Antiquités Romaines de Belgique, de Hollande et d'Angleterre signalées dans les Itinéraires de Dubisson-Aubenay (1637-38). By Leon Halkin. Reprint.

Die Dijk van Drusus. By C. W. Vollgraaf. Reprint.

Zur Geschichte der arae Flaviae-Deutung. By Prof. Dr Goessler. Stuttgart. Reprint.

A Printing House of Old and New Edinburgh, 1775-1925. Published by H. & J. Pillans & Wilson, Edinburgh, to commemorate the 150th anniversary of the foundation of the firm. 1925.

Foundations of Scotland from the Earliest Times to 1286. By Agnes Mure Mackenzie. Edinburgh, 1938.

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The Bible and Archæology. By Sir Frederic Kenyon, G.B.E., K.C.B. Edinburgh, 1940.

Proceedings of the Devon Archæological Exploration Society, 1938. Vol. iii. part 2.

Caravan Cities. By M. Rostovtzeff. Translated by D. and T. Talbot Rice.

Le Cimetière Gallo-Romain de Strasbourg. By Le Chanoine A. Straub. Strasbourg, 1881.

Annual of the British School at Athens. No. xxxvii. Session 1936-37. London, 1940.

Anatolian Studies. Presented to Sir William Mitchell Ramsay by W. H. Buckler and W. M. Calder. Manchester, 1923.

Das Grabmal von Igel. By H. Dragendorff and E. Krüger. Trier, 1924.

Chars Funéraires Bacchiques dans les Provinces Occidentales de l'Empire Romain. By A. Alföldi. Extrait de *l'Antiquité Classique*. Brussels, 1939.

Sitzungsberichte der preussischen Akademie der Wissenschaften, Berlin, 1931.

Bericht des Vereins Carnuntum in Wien, 1923-25. Wien, 1926.

Der einzig dastehende Tempelbezirk in Trier. By Dr Siegfried Loefschete. Berlin, 1931.

Die vor- und frühgeschichtliche Siedlung auf dem Umlauf am Kamp in Niederösterreich (Bez-Horn) von Ernst Nischer-Falkenhof. Wien, 1931.

Aus dem römischen Kärnten. By Rudolf Egger. 1939. Reprint.

Société Française d'Archéologie. Discours par M. Adrien Blauhel. Paris, 1938. Reprint.

Die Wasserversorgung des Römer Kastells Saalburg. By H. Jacobi. Reprint.

History of the Archives of the Royal Society. By William Bragg. Reprinted from *Science*, vol. 89, 1939.

Presented by the late Sir GEORGE MACDONALD, K.C.B., LL.D., D.Litt., *President*.

(4) The Post Office Annual Directory for 1824-25. Edinburgh, 1824. Presented by H. NORMAN CRANSTON, A.M.I.E.E., 11 Randolph Place, Edinburgh.

(5) The Orient and Europe. From *The American Journal of Archaeology*, vol. xlv. (1939), No. 1.

Some Results of the Archæological Research in Scotland, 1932-37. From *Annual Report of the Institute of Archaeology*. Presented by Professor V. GORDON CHILDE, D.Litt., D.Sc., F.S.A.Scot., the Author.

(6) Clan Munro Annual. No. 1, 1939. Presented by Captain D. J. MUNRO, Clearwell, New Galloway.

(7) The Journal of the Manx Museum. Vol. iii. Nos. 47-53 and Index, and vol. iv. Nos. 54-60. Presented by THE TRUSTEES.

(8) Report on The Royal Scottish Museum, Edinburgh, for the year 1938. Edinburgh, 1939. Presented by THE DIRECTOR.

(9) The Romance of Dumfries and Galloway in Early Caledonia. From *Dumfries and Galloway Standard*, 2nd May 1922 to 15th August 1923. Presented by EDWARD STEPHEN HARKNESS, D.C.L., LL.D., and The Rev. J. KING HEWISON, D.D., F.S.A.Scot., the Author.

(10) Cahiers d'Archéologie et d'Histoire d'Alsace. Anzeiger für Elsässische Altertumskunde. Nos. 117-120. May 1939. xxx^e Année. Presented by R. FORRER, Musée Préhistorique et Gallo-Romain, Palais Rohan, Strasbourg.

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